

KV-19XMD / 19XMTD

RM-652 RM-654

SERVICE MANUAL

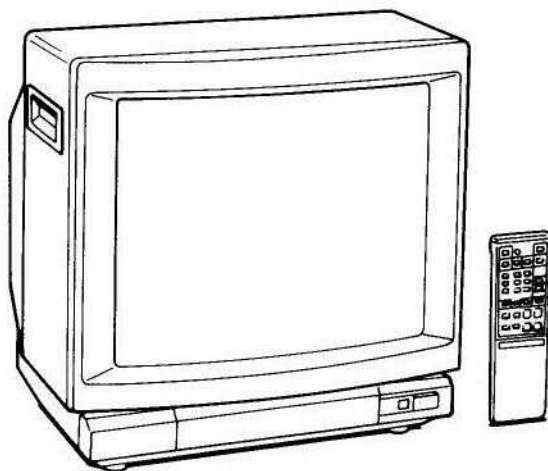
West Germany Model

KV-19XMD

Chassis No. SCC-B35B-A

KV-19XMTD

Chassis No. SCC-B35C-A



GP-2 CHASSIS

Note: The service manual for RM-652 and RM-654 have been issued separately.

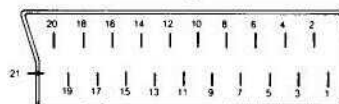
MODELS OF THE SAME SERIES

KV-2100WX

SPECIFICATIONS

Television system	CCIR system, B, G and H
Colour system	PAL, SECAM
Channel coverage	VHF channels E2-E12 UHF channels E21-E69 Cable TV channels S1-S20 (a total of up to 30 preselected channels)
Picture tube	Trinitron tube Approx. 49.4 cm (19 inches) 90 degree deflection (Approx. 45.8 cm picture measured diagonally)
Aerial socket	75-ohm standard coaxial socket
Speaker	5 x 9 cm dia.
Audio output	2 W (with 10% harmonic distortion)
Input/output	21-pin connector, Euro AV with the requirement of CENELEC standard
Power requirements	220-240 V AC, 50 Hz
Power consumption	KV-19XMTD: 66 Wh KV-19XMD: 62 Wh
Dimensions	Approx. 467 x 437 x 461 mm (w/h/d) (18½ x 17¼ x 18¼ inches)
Weight	KV-19XMTD: approx. 19.5 kg (43 lb) KV-19XMD: approx. 19.4 kg (42 lb 12 oz)
Accessories supplied	KV-19XMTD: Remote Commander RM-654 KV-19XMD: Remote Commander RM-652 with two R6 (size AA) batteries

21-pin Euro Connector Configuration



PIN	SIGNAL	SPECIFICATION
1	Audio output	0.5 Vrms/1 kilohm or less
2	Audio input	0.5 Vrms/10 kilohms or more
3	Audio output	0.5 Vrms/1 kilohm or less
4	Earth (audio)	
5	Earth (B-input)	
6	Audio input	0.5 Vrms/10 kilohms or more
7	B-input	0.7 Vp-p/75 ohms
8	Function switching	9.5 V to 12 V
9	Earth (G-input)	
10		
11	G-input	0.7 Vp-p/75 ohms
12		
13	Earth (R-input)	
14	Earth	
15	R-input	0.7 Vp-p/75 ohms
16	Fast blanking	1 V to 3 V/75 ohms
17	Earth (video)	
18	Earth (fast blanking)	
19	Video output	1 Vp-p/75 ohms
20	Video input	1 Vp-p/75 ohms
21	Screening plug	

Design and specifications subject to change without notice.



MC-Service




TRINITRON® COLOR TV
SONY®

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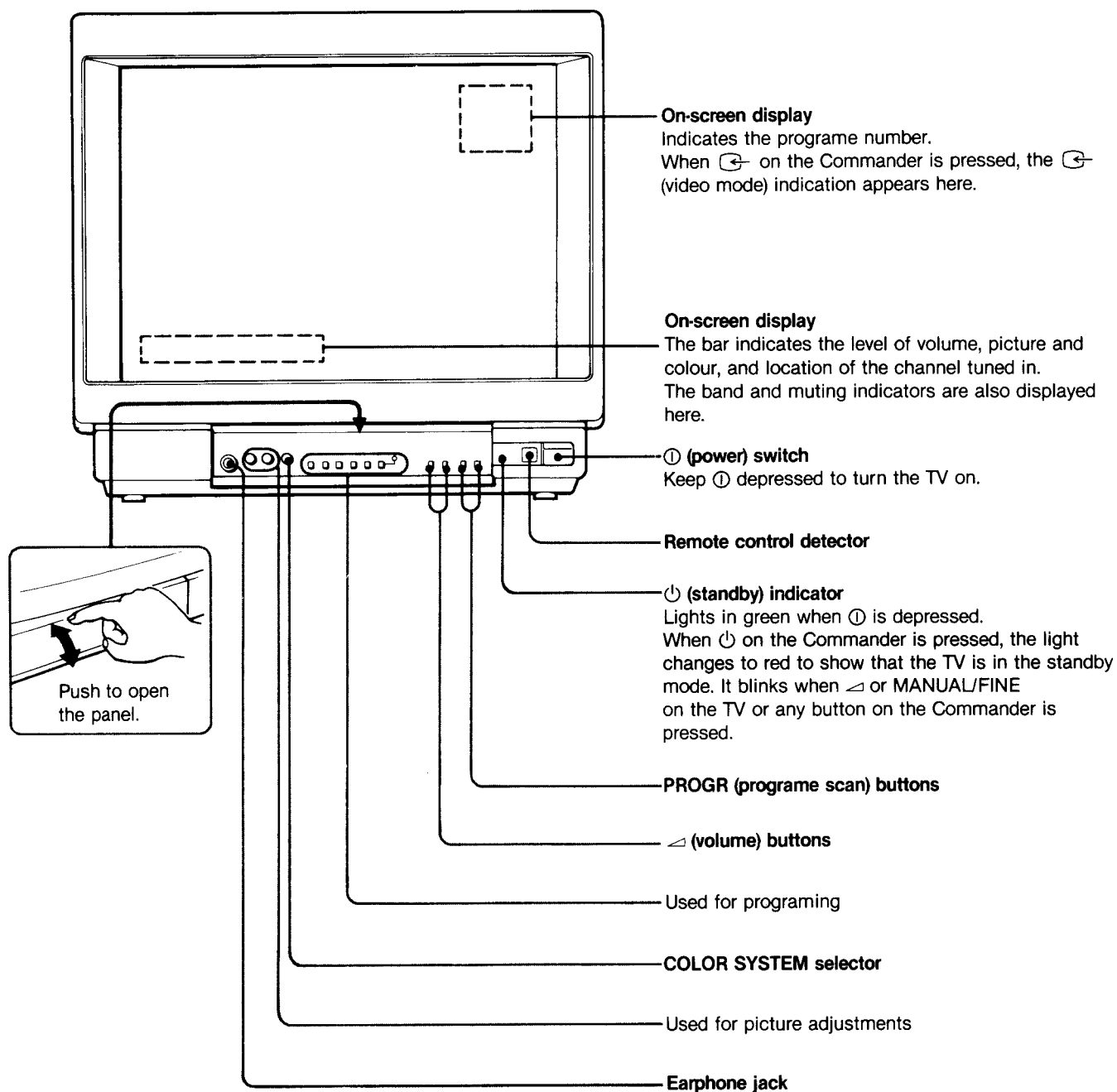
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SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

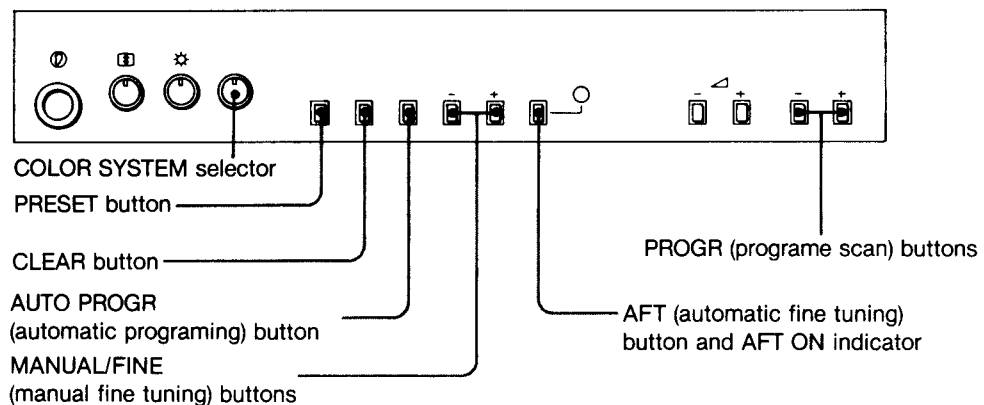
1-1. LOCATION OF CONTROLS





1-2. PROGRAMMING

You can choose either automatic or manual programming. Automatic programming presets up to 30 receivable channels automatically from the lowest frequency to the highest. With manual programming the active channels can be preset in the order you prefer.



Panel opened



AUTOMATIC PROGRAMMING

- 1 Depress ①.
- 2 Press  on the Commander if the  indication is displayed on the screen.
- 3 Set COLOR SYSTEM to AUTO.
- 4 Press PRESET (ON) to set the TV in the programing standby mode. The programe number will blink and the band indicator will appear on the screen.
- 5 With PROGR +/- or the programe number buttons on the Commander, select the programe position from which automatic programing begins.
- 6 Press AUTO PROGR.
Automatic programing will start to tune in all receivable channels in sequence. When no more station can be located, the programe number from which the automatic programing started will light on the screen and automatic programing will stop. The programing mode will be cancelled automatically.

MANUAL PROGRAMMING

- 1 Depress ①.
- 2 Press  on the Commander if the  indication is displayed on the screen.
- 3 Set COLOR SYSTEM to AUTO.
- 4 Press PRESET (ON) to set the TV in the programing standby mode. The programe number will blink and the band indicator will appear on the screen.
- 5 Press PROGR +/- or the programe number buttons on the Commander to select the programe position where a channel is to be tuned in.
- 6 Press + or - MANUAL/FINE.
The first channel found will appear. Every time you press + MANUAL/FINE, a higher-numbered channel will be tuned in and every time you press - MANUAL/FINE, a lower-numbered channel will be tuned in. Repeat pressing until the desired channel is found.

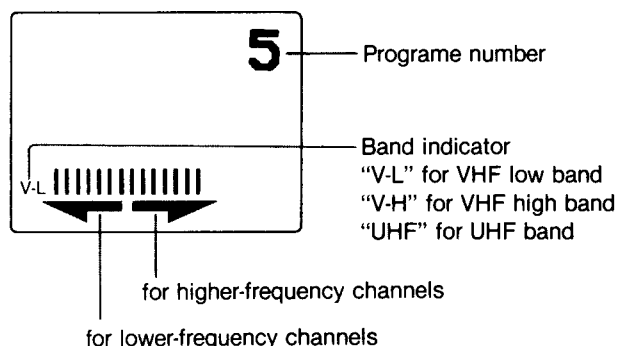
Repeat steps 5 and 6 for all desired channels.

- 7 Press PRESET (OFF).

To reset the TV to the lowest frequency of the band, press CLEAR when PRESET is set to ON.

ON-SCREEN DISPLAY WHILE TUNING

The band in which the channel is being tuned in and a bar will appear. The length of the bar shows the approximate position of the channel being tuned in within the band.



FINE-TUNING A WEAK STATION

If the picture of a particular channel is not acceptable, make sure PRESET is set to OFF (the band indicator does not appear on the screen), and keep + or – MANUAL/FINE pressed until the picture becomes clear. When either MANUAL/FINE is pressed, the automatic fine tuning on the selected channel is deactivated and the AFT ON indicator goes off. To view this particular channel, keep the automatic fine tuning deactivated. (Do not press AFT.) When other channels are selected, the automatic fine tuning reactivates automatically.

SKIPPING UNUSED PROGRAME POSITIONS

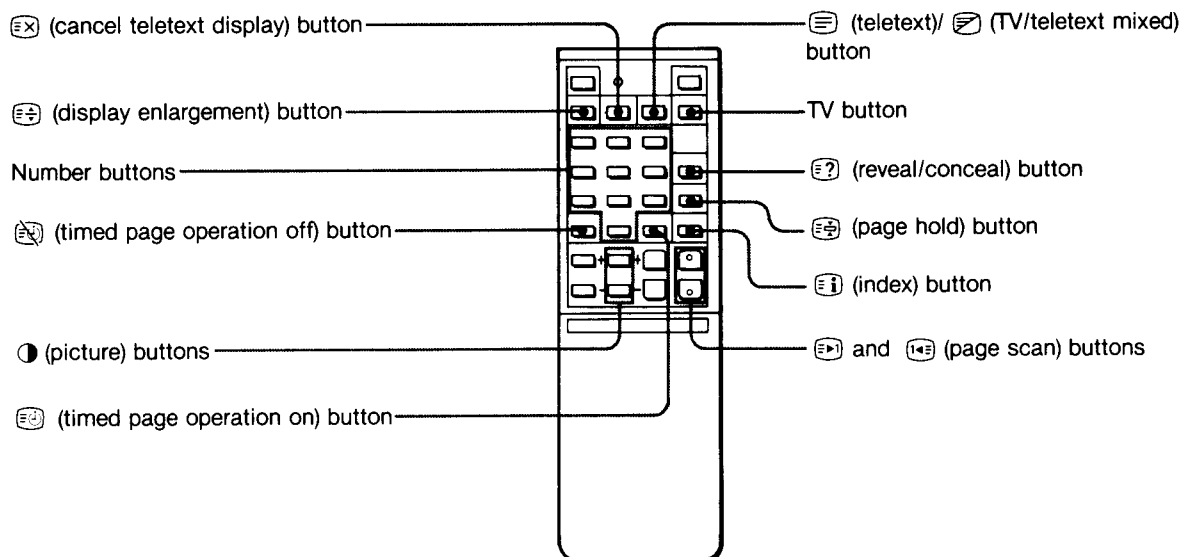
- 1** Press PRESET (ON) when the programe number display shows an unused position. The programe number will blink.
- 2** Press CLEAR.
- 3** Press PRESET (OFF).

Later, when you press PROGR +/-, the unused positions will be skipped.

1-3. OPERATION FOR TELETEXT (Only for the KV-19XMTD)

VIEWING TELETEXT

To view the teletext service, use the RM-654 Remote Commander.
The buttons used for teletext operation are indicated in green.



Operation

- 1** Select the TV channel for the desired teletext service.
- 2** Press / to display the teletext service.
Once / has been pressed, the TV channel cannot be changed.
- 3** Key in the three digits for the desired page using the number buttons. If an error is made, complete the three-digit sequence by keying in any digit. Then, re-enter the correct page number.
The requested teletext page is displayed.

To return to the TV mode, press TV.

The teletext service can be displayed directly from the standby mode by pressing / .

To receive the teletext service of a different TV channel

- 1** Press TV to return to the TV mode.
- 2** Select the desired TV channel.
- 3** Press / .

Notes

- To receive the teletext service accurately, keep AFT inside the panel switched on during teletext operation.
- During teletext operation, do not input the RGB signals from the equipment, such as a microcomputer, connected to the 21-pin connector.

To display the index page

Press .
If the necessary signal is not being broadcast, page 100 is displayed.

To access the next or preceding page

Press or .

To superimpose the teletext display on the TV picture

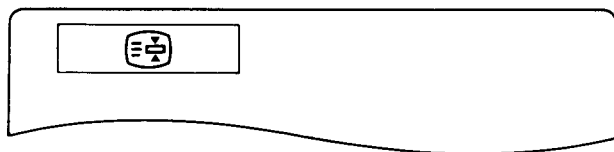
Press / twice from the TV mode.
Press again to return to the teletext display.



To suppress the teletext display so that the TV picture is displayed

Press .
This button can be operated from both the teletext and TV/teletext mixed modes.


To prevent a teletext page (subpage) from being updated/changed

Press . The page hold symbol appears at the top left of the screen.




To resume normal teletext reception, press  / .

To enlarge the teletext display

Press .


Press once to enlarge the upper half of the display; press again to enlarge the lower half of the display; press again to return to the normal display.

To reveal concealed information such as the answers to a quiz

Press .

Press again to conceal the answers.

To adjust the contrast of the teletext display

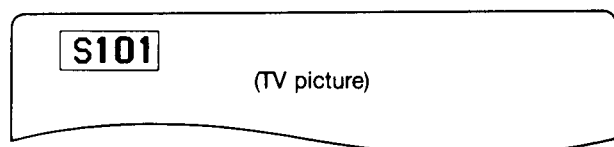
Press .



To watch the TV programme while waiting for a requested page to be displayed

1 Request a new page.

2 Press  to watch the TV programme.

When the requested page has been captured, the page number appears at the top left of the screen.



To view this page, press  / .

To have a requested page displayed at a predetermined time

1 Request a time coded page (e.g. alarm page).

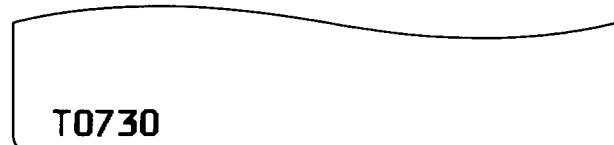
2 Press .


"T****" will appear at the bottom left of the screen.





3 Enter your request time with the number buttons, using four digits.


For example, 0730.



To watch the TV programme until the requested time, press .

At the requested time, the page number will appear at the top left of the screen.

To view this page, press  / .

To cancel the request, first ensure that the teletext page is displayed, then press .

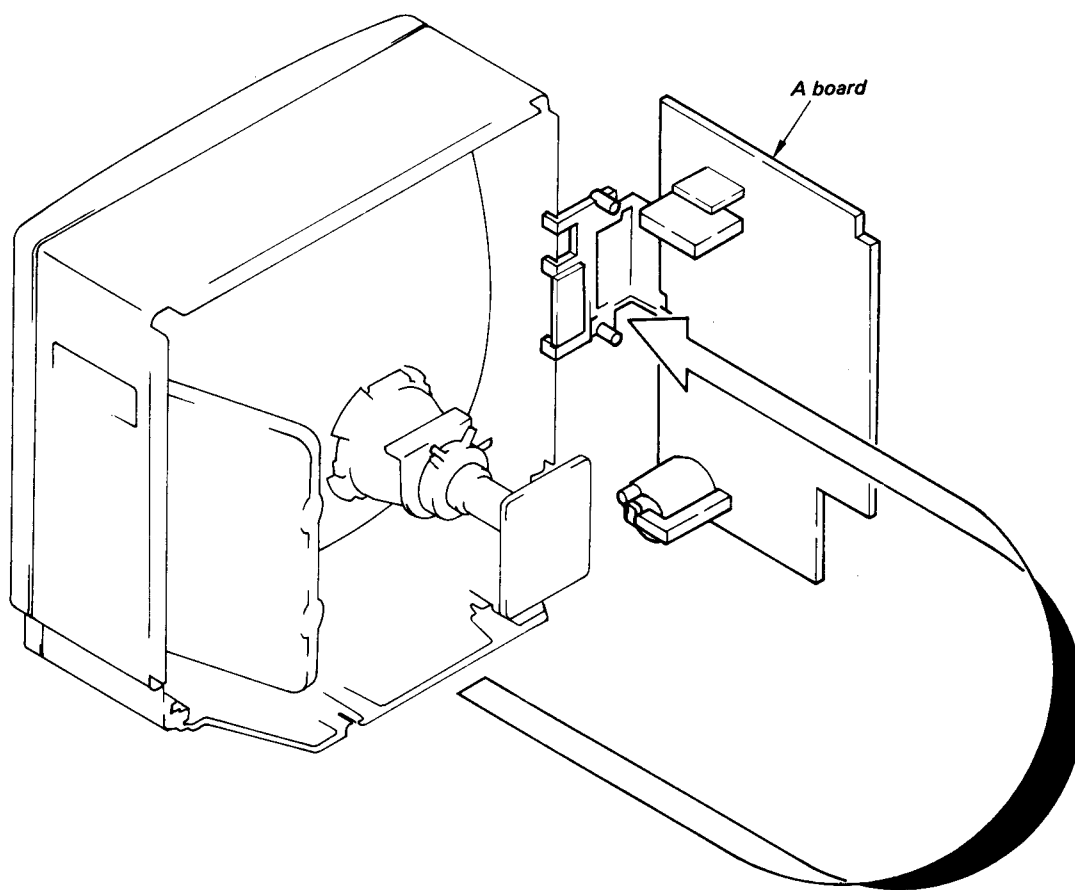
SECTION 2

DISASSEMBLY

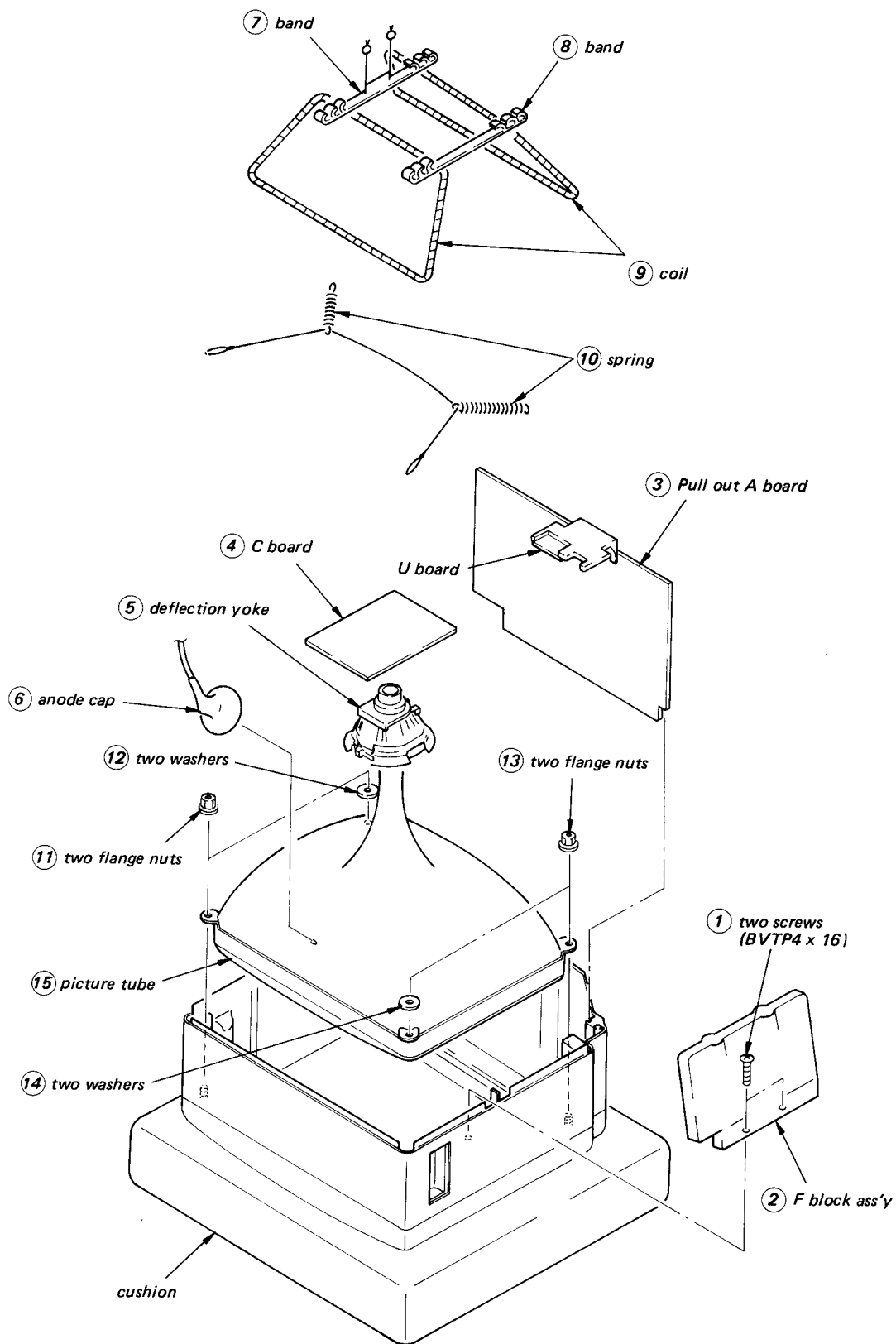
2-1. SERVICE POSITION

Note: Follow the disassembly procedure in the numerical order given.

- (1) Remove the back cover and pull out the A board, while slightly lifting the back portion of the board.
- (2) Untie all the bands which connect the connector assembly.
- (3) Hold the A board by inserting the hooks of the antenna terminal board to the edge of the cabinet, as shown in the figure below.



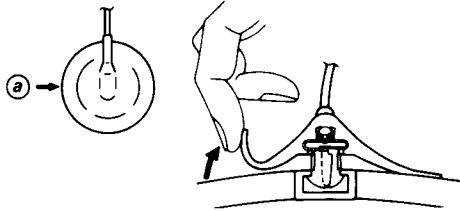
2-2. PICTURE TUBE REMOVAL



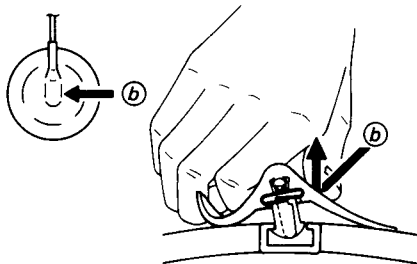
KV-19XMD

2.3. ANODE CAP REMOVAL

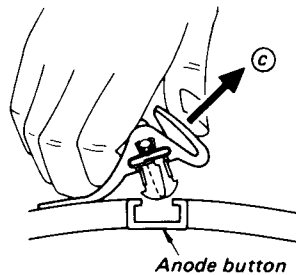
• Removing Procedures



- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).



- ② Using a thumb, pull up the rubber cap firmly in the direction indicated by the arrow (b).



- ③ When one side of the rubber cap is separated from the anode button, the anode cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow (c).

SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted :

- PICTURE control normal
- ⊗ BRIGHTNESS control mechanical center

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. G2 and White Balance
5. Sub Bright

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser

3-1. BEAM LANDING

Preparation :

- Feed in the white pattern.
 - Before stating, degauss the entire screen.
1. Loosen deflection yoke screw.
 2. Adjust purity control as shown in Fig. 3-1.
 3. Slide deflection yoke as far forward as it will go.
 4. Turn the raster signal of the pattern generator to red.
 5. Adjust purity control to center vertical red band as shown in Fig. 3-2.
 6. Slide deflection yoke back for a uniform red screen.
 7. Check green and blue rasters for uniformity by performing the same way as steps 4, 5 and 6.
 8. Tighten the deflection yoke screw.
 9. Check if mislanding appear at corners a-d as shown in Fig. 3-3. If mislanding is observed, correct it as shown in Fig. 3-3.
 10. Confirm that beam landing is correct when the receiver is faced in all directions.

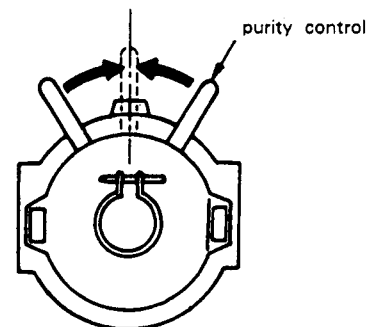


Fig. 3-1.

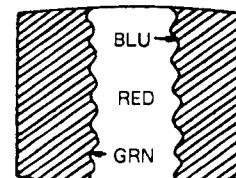


Fig. 3-2.

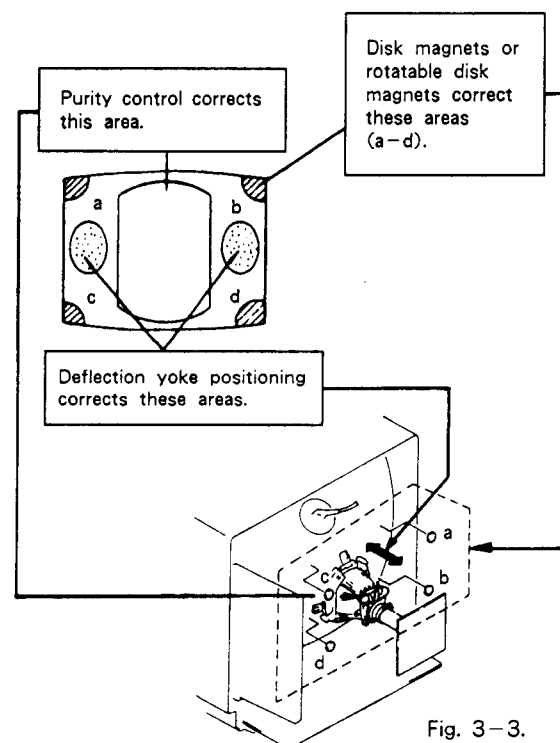
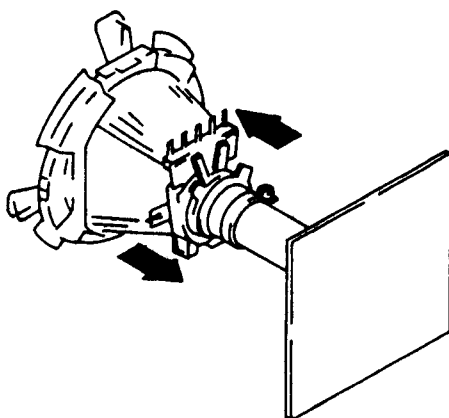


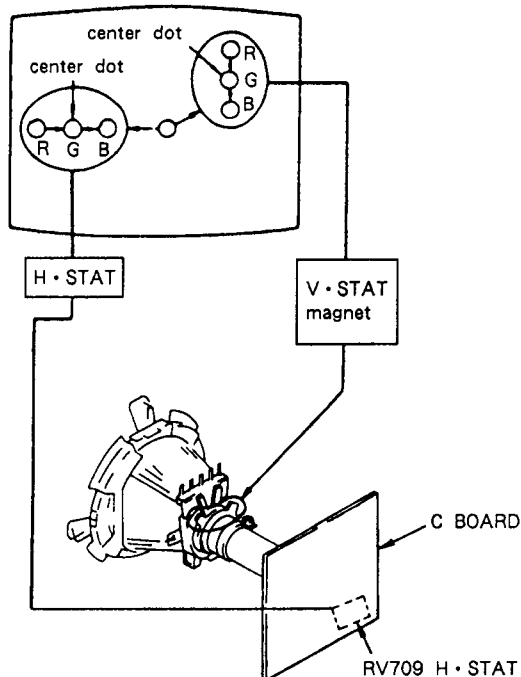
Fig. 3-3.

3-2. CONVERGENCE

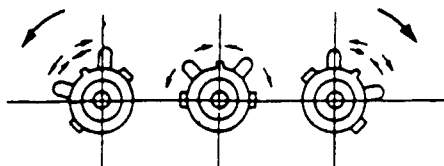
Preparation :

- Before starting, perform FOCUS, H • SIZE and V • SIZE adjustment.
- Set BRIGHT control to minimum.
- Feed in the dot pattern.

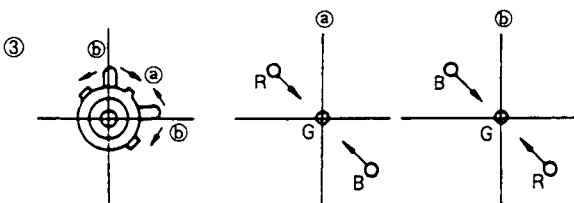
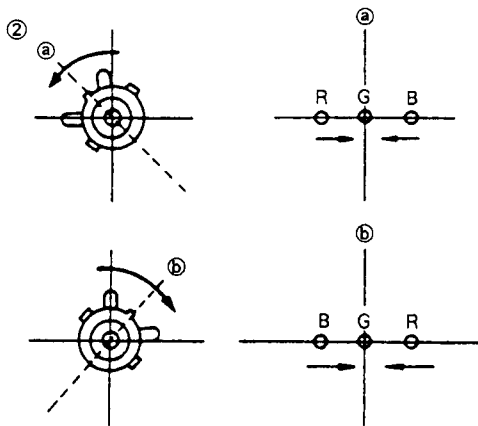
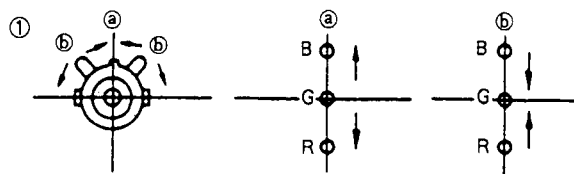
(1) Horizontal and Vertical Static Convergence



1. Adjust H • STAT VR to coincide red, green and blue dots on the center of screen (Horizontal movement).
 2. Adjust V • STAT magnet to coincide red, green and blue dots on the center of screen (Vertical movement).
 3. If the red, green and blue dots do not coincide on the center of screen with H • STAT VR, perform horizontal convergence adjustment using H • STAT VR and V • STAT magnet as shown below. (In this case, H • STAT VR and V • STAT magnet effect each other.)
- Tilt the V • STAT magnet and adjust static convergence to open or close the V • STAT magnet.



4. When the V • STAT magnet is moved in the direction of arrow (a) and (b), red, green and blue dots move as shown below.

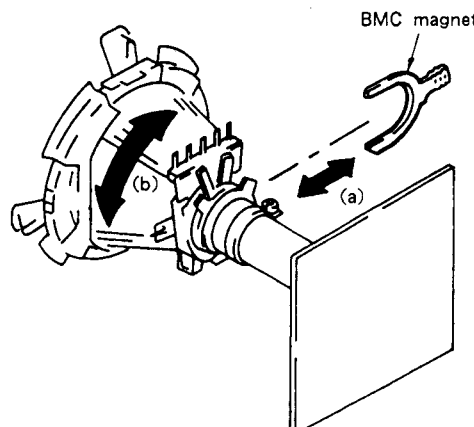


If blue dot does not coincide with red and green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H • static convergence.

Rotate BMC magnet (b) to correct insufficient V • static convergence.

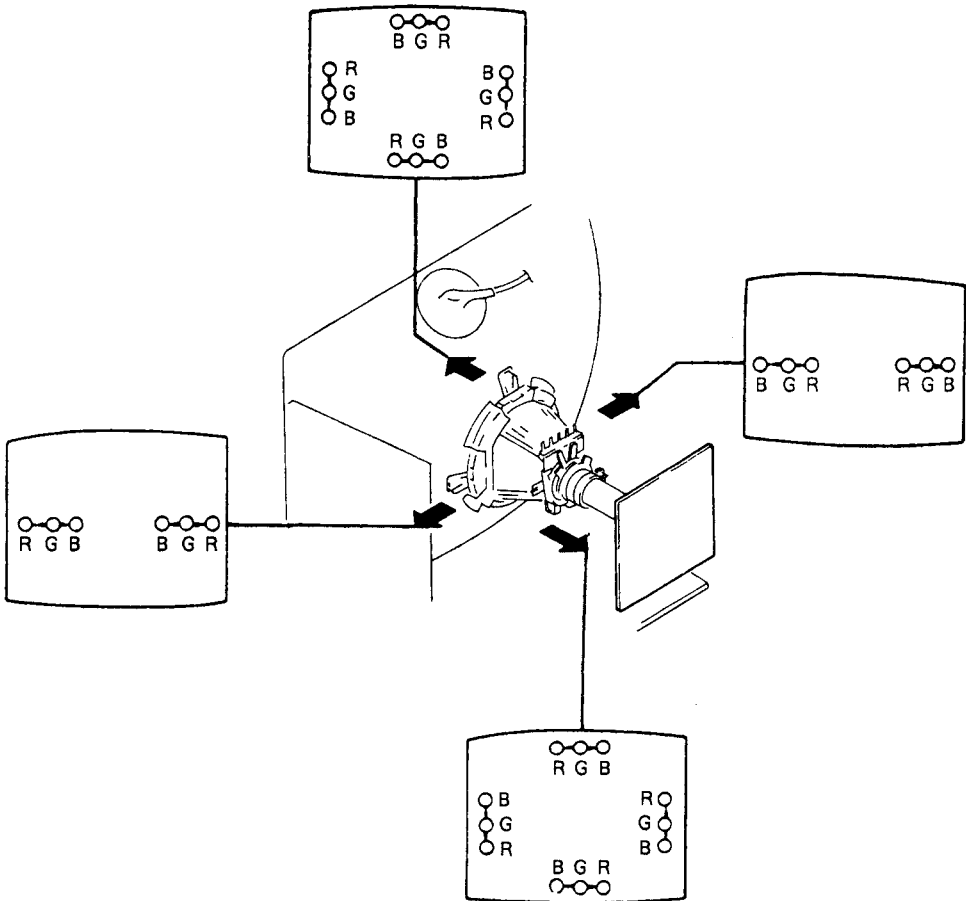
In either case, repeat Beam Landing Adjustment.



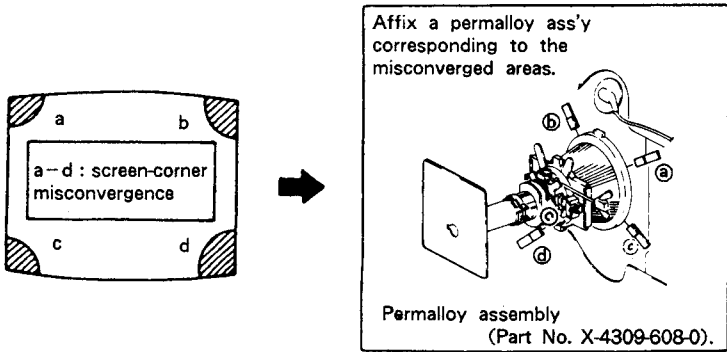
(2) Dynamic Convergence Adjustment

Preparation :

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.
 - Loosen deflection yoke screw.
 - Remove deflection yoke spacers.
- Move the deflection yoke for best convergence as shown below.
 - Tighten the deflection yoke screw.
 - Install the deflection yoke spacers.



(3) Screen-corner Convergence

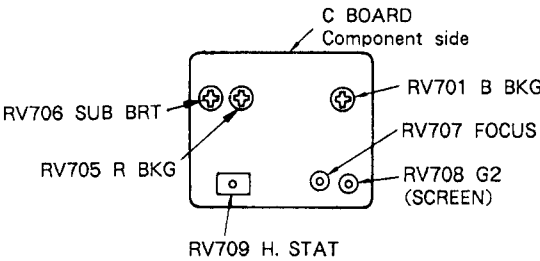


3-3. FOCUS

Adjust RV707 (FOCUS) control for a best picture.

3-4. G2 AND WHITE BALANCE

- (1) G2 ADJ.
- Receive dot signal.
 - Set PIC and BRT control to minimum.
 - Connect external power supply 180 V dc to R.G.B cathode.
 - Adjust G2 VR RV708 to the point where retrace glows faintly.

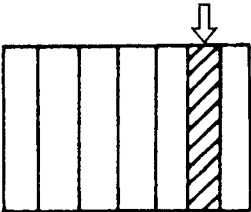


(2) WHITE BALANCE

- Receive WHITE signal.
- Set PIC, BRT and COL to normal.
- Adjust R.B BKG VRS (RV705, RV701) to get white balance.

3-5. SUB BRT

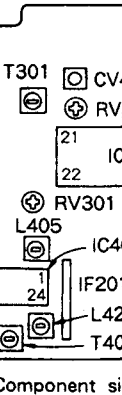
- Receive color-bar signal.
- Set PIC, COL control to minimum and BRT VR to center.
- Adjust SUB BRT (RV706) to the point where the arrow indicate.



4-1. F

- +115 V
- Connect (+115 V)
 - Adjust multimeter

4-2. A



TU AGC

- Tune i
- Adjust cross-m

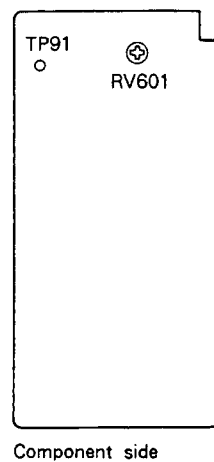
SECTION 4

CIRCUIT ADJUSTMENTS

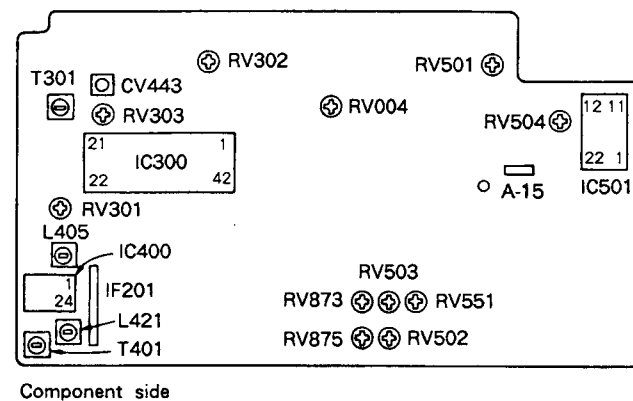
4-1. F BOARD ADJUSTMENT

+115 V (RV601)

1. Connect a digital multimeter to the TP91. (+115 V LINE)
2. Adjust RV601 for 115 ± 0.2 V dc on the digital multimeter.



4-2. A BOARD ADJUSTMENTS

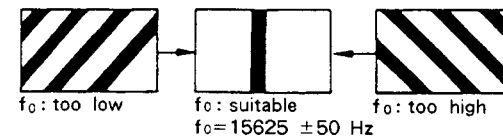


TU AGC (IF201)

1. Tune in an off-air signal.
2. Adjust AGC VR (IF201) so that snow-noise and cross-modulation just disappear from the picture.

H • FREQ (RV501)

1. Receive PAL signal.
2. Connect an electrolytic capacitor ($100 \mu\text{F}/16\text{V}$) between pin ① of IC501 and ground.
3. Adjust RV501 so that picture flowing in horizontal direction stops.
4. Removal a electrolytic capacitor from IC501.



H • CENT (RV504), H • SIZE (RV873)

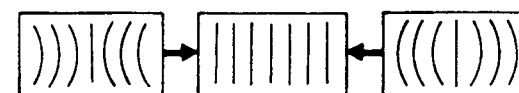
1. Receive a cross-hatch signal.
2. Set the PICTURE and BRIGHT controls to normal.
3. Adjust H • CENTER TAP (A-15), H • CENT (RV504) and H • SIZE (RV873) for best picture.

V • CENT (RV551), V • SIZE (RV503), V • LIN (RV502)

1. Receive a cross-hatch signal.
2. Set the PICTURE and BRIGHT controls to normal.
3. Adjust V • CENT (RV551), V • SIZE (RV503) and V • LIN (RV502) for best picture.

PIN AMP (RV875)

Adjust RV875 to make vertical lines straight as shown.



ACC (RV302)

1. Receive PAL color-bar signal.
2. Connect an oscilloscope to the pin ⑦ of IC300.
3. Adjust RV302 for 180 ± 5 mVp-p on the oscilloscope as shown in figure.

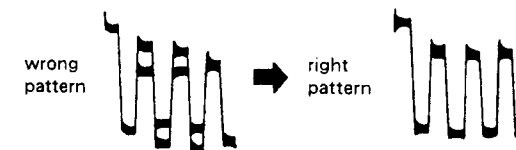


CW OSC (CV443)

1. Receive PAL color-bar signal.
2. Short circuit between pins ⑪ and ⑫ of IC300 with jumper wire.
3. Supply voltage DC4.5 V to the pin ③ of IC300.
4. Adjust CV443 to obtain the stable color picture.
5. Removal a jumper wire from IC300.

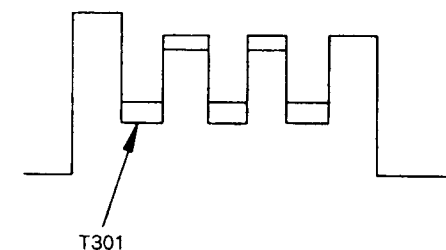
ANTI-PAL (RV301, RV303), LINE CRAWLING (T301)

- ANTI-PAL ADJUSTMENT
1. Input the PAL color-bar signal.
 2. Set the PICTURE, COLOR and BRT control to normal.
 3. Observe the pin ⑫ of IC300 (Blue) output waveform shown in the oscilloscope.
 4. Adjust RV301 (DELAY) and RV303 (PHASE) to obtain the waveform as shown below.



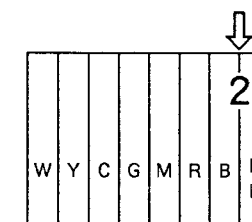
- LINE CRAWLING ADJUSTMENT

1. Input the PAL color-bar signal.
2. Set the PICTURE, COLOR and BRT control to normal.
3. Observe the pin ⑫ of IC300 (Blue) output waveform shown in the oscilloscope.
4. Adjust T301 for minimum line crawling.



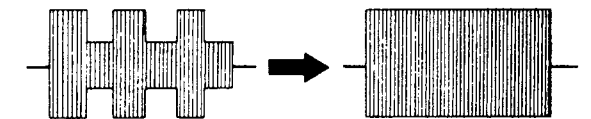
CHARACTER POSITION (RV004)

1. Receive PAL color-bar signal.
2. By adjusting RV004, replace the character express to the point indicated by the arrow below.

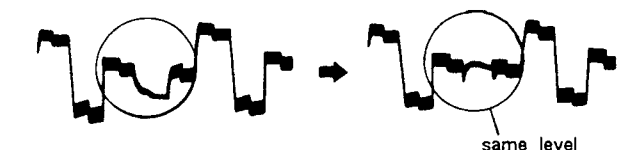


COLOR BALANCE (T401, L405, L421)

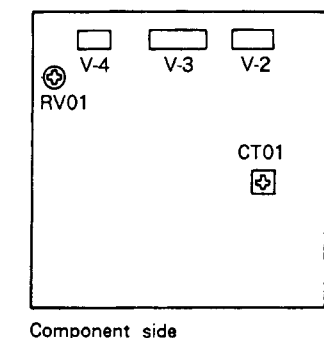
1. Feed in a SECAM color-bar signal.
2. Connect an oscilloscope to the pin 24 of IC400 via 2pF capacitor.
3. Adjust T401 at shown the following figure.



4. Connect the dual-trace-oscilloscope to the emitter of Q401 and Q402 (R-Y, B-Y)
5. Adjust L421 (B-Y) and L405 (R-Y) at shown the following figure.



4-3. V BOARD ADJUSTMENTS (KV-19XMTD only)



Component side

CLOCK (CT01)

1. Disconnect V-1 connector.
2. Set the Teletext mode.
3. Connect digital multimeter to pin ⑨ of IC03.
4. Adjust CT01 to $6.0\text{ MHz} \pm 250\text{ Hz}$.

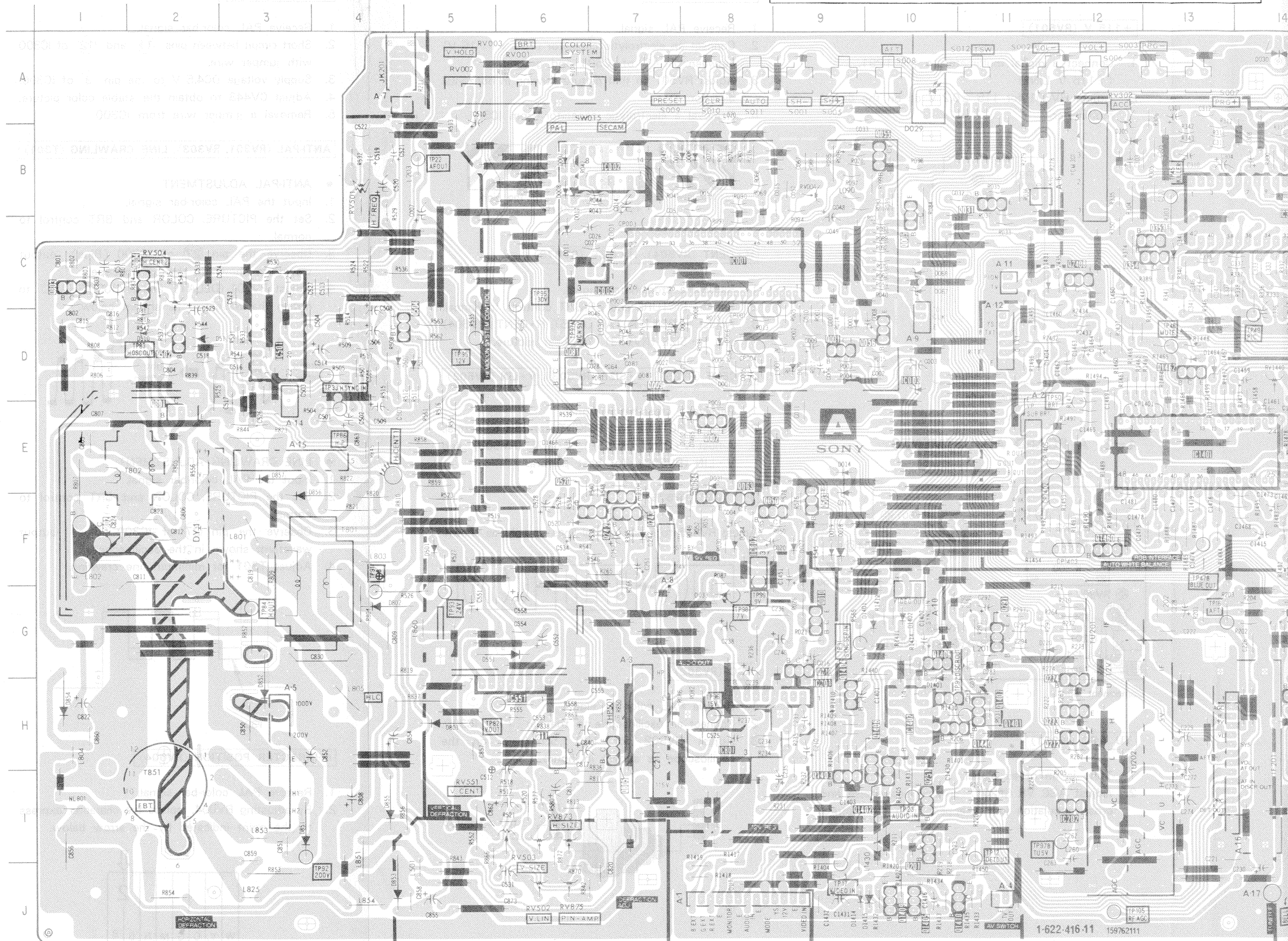
PIC LEVEL (RV01)

Adjust RV01 in order to have 2.1 V in R.G.B output level (black level to white peak). (V-3 connector)

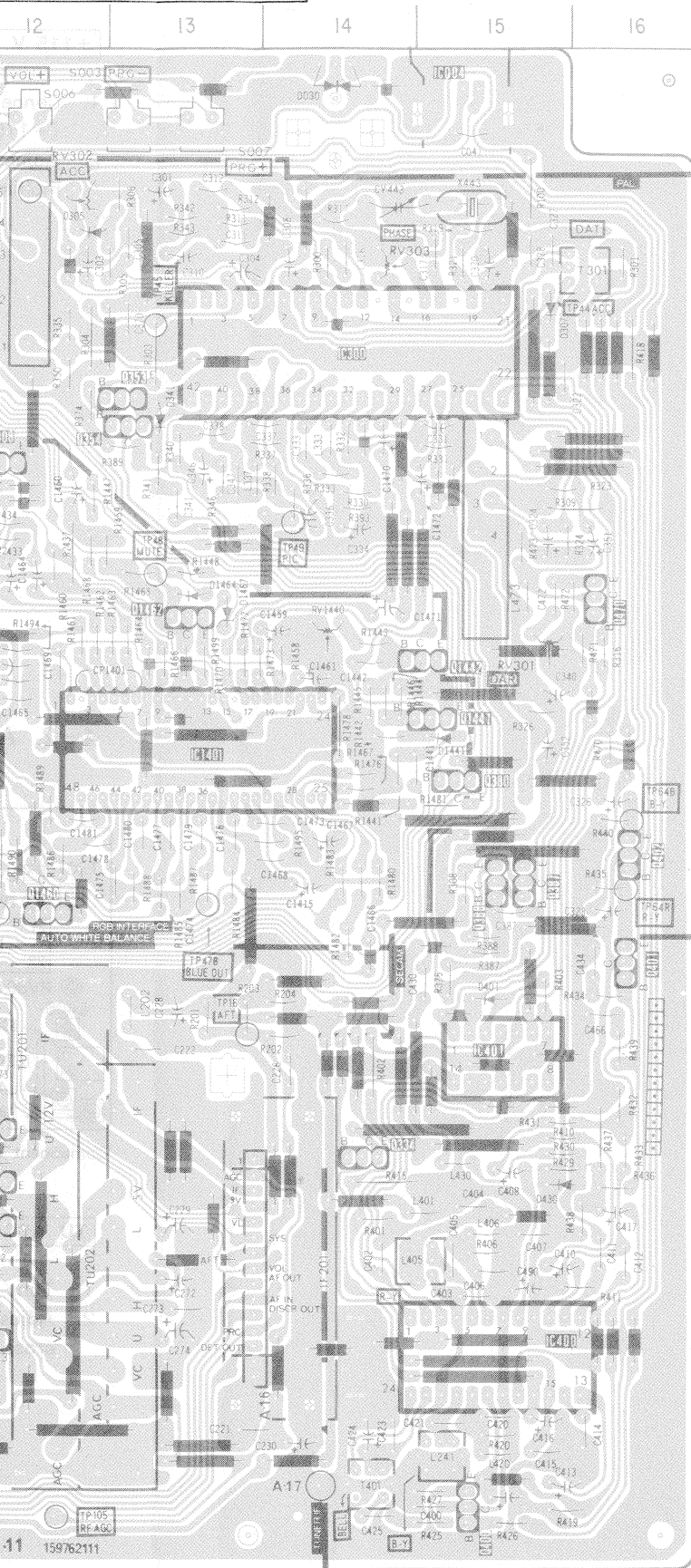
— A Board —

A

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



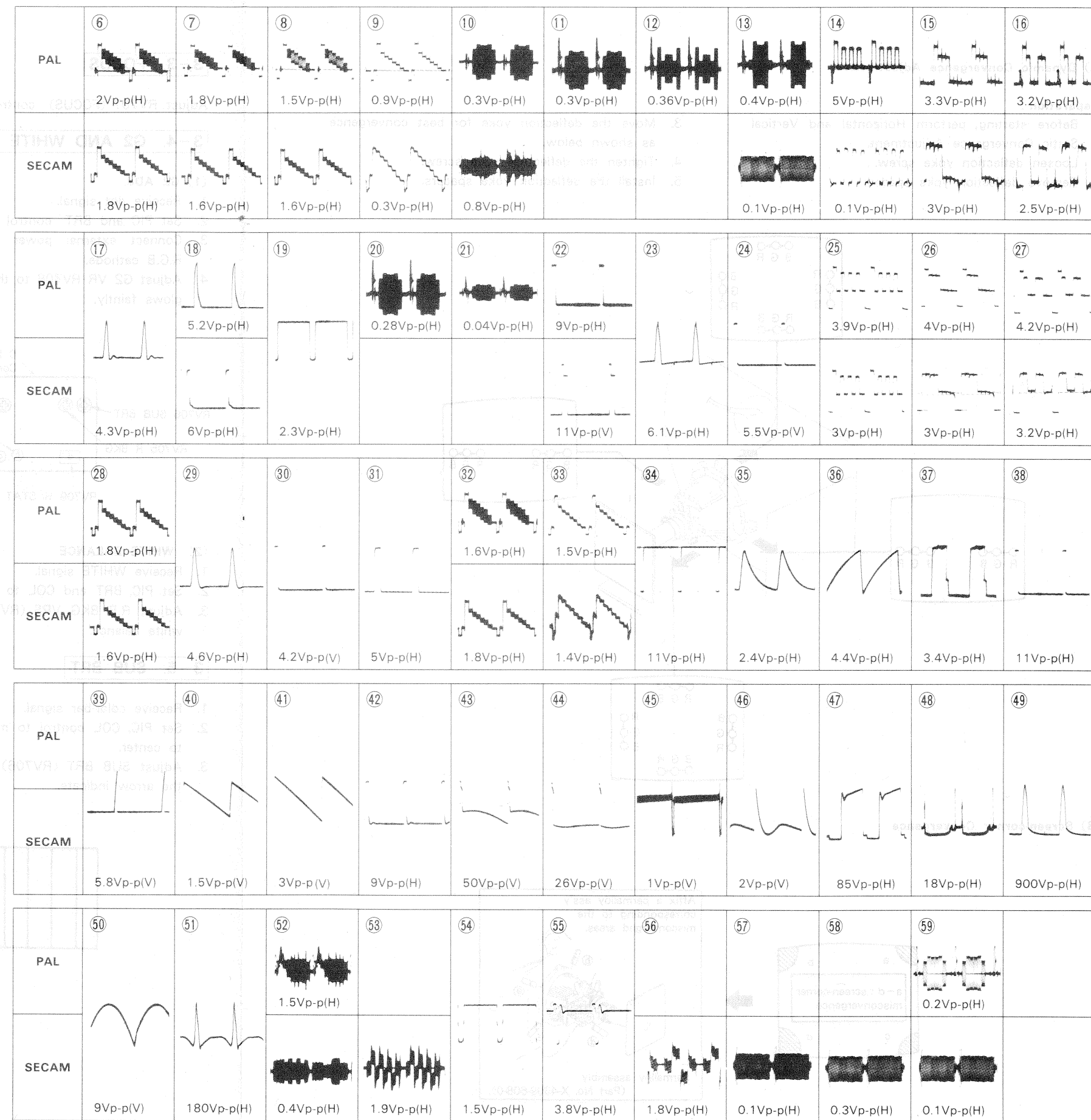
contains high voltage of over
to prevent an electric shock in



KV-19XMD/19XMTD RM-652 RM-654 RM-652 RM-654

WAVEFORMS A BOARD

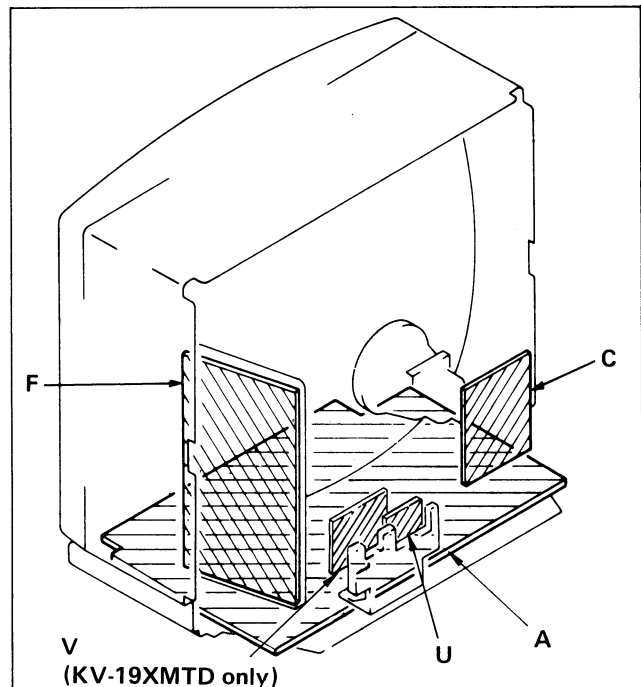
IC		DIODE	
IC001	C-8	D001	D-8
IC002	B-7	D003	D-9
IC003	D-10	D004	D-7
IC004	A-15	D006	B-8
IC005	C-7	D007	B-6
IC201	H-8	D008	B-6
IC202	I-12	D010	B-8
IC300	C-14	D011	C-6
IC400	H-15	D014	F-9
IC401	I-15	D017	B-6
IC501	D-3	D027	F-9
IC551	H-6	D029	A-10
IC801	H-8	D030	A-14
IC802	F-9	D031	F-8
IC1401	E-13	D032	E-8
IC1402	H-10	D033	G-8
TRANSISTOR		DIODE	
Q001	D-9	D051	B-8
Q002	E-8	D079	D-9
Q005	C-10	D081	D-7
Q009	D-8	D084	F-5
Q010	G-9	D211	F-9
Q031	B-11	D242	F-7
Q050	F-9	D305	B-13
Q055	B-10	D307	B-15
Q056	D-10	D341	D-13
Q063	F-8	D401	G-15
Q081	D-7	D430	H-15
Q084	F-8	D501	F-5
Q201	I-10	D502	D-5
Q210	H-9	D503	D-5
Q242	F-7	D520	F-6
Q243	F-7	D551	G-6
Q272	H-12	D801	H-5
Q273	H-12	D802	G-4
Q274	G-12	D811	D-2
Q291	G-11	D851	I-4
Q334	H-14	D852	H-3
Q353	C-13	D853	J-5
Q354	C-13	D854	H-1
Q380	E-15	D855	I-4
Q387	F-15	D856	E-4
Q388	F-15	D857	E-3
Q400	J-15	D1403	H-10
Q401	F-16	D1404	D-11
Q402	F-16	D1414	J-9
Q470	D-16	D1415	J-10
Q503	F-9	D1431	C-12
Q504	D-5	D1441	E-15
Q520	F-7	D1464	D-13
Q801	E-2	D1465	E-8
Q802	F-1	D1466	E-6
Q803	C-1	D1467	D-13
Q804	C-2	TRAIER CAPACITOR	
Q805	H-7	CV443	B-14
Q811	H-6	VARIABLE RESISTOR	
Q1401	H-11	RV004	B-9
Q1402	I-10	RV301	E-15
Q1403	I-9	RV302	A-12
Q1405	J-10	RV303	B-14
Q1406	G-10	RV501	B-4
Q1407	H-11	RV502	I-6
Q1408	I-10	RV503	I-6
Q1409	J-10	RV504	C-2
Q1410	J-11	RV551	I-6
Q1440	H-11	RV873	I-6
Q1441	E-15	RV875	I-6
Q1442	E-15		
Q1460	F-12		
Q1462	D-13		
Q2408	C-12		



5-3. SCHEMATIC DIAGRAMS

	1	2	3	4	5	6	7	8	9	10	11
A	IC001 TUNING	Q400 VIDEO BUFF	D031 OFF MUTE								
	IC002 MEMORY	Q401 R-Y BUFF	D032 MUTE								
	IC003 +33V REG	Q402 B-Y BUFF	D033 DISCHARGE								
	IC004 REMOCON	Q470 1H AMP	D066 TXT SW								
	IC005 RESET	Q503 SYNC BUFF	D067 CLK PROTECT								
	IC201 AUDIO AMP	Q504 ABL AMP	D068 TXT D PROTECT								
	IC300 Y/C PROCESS	Q801 H DRIVE	D079 PIC D/A								
	IC400 SECAM PROCESS	Q802 H OUT	D081 +5V REG								
	IC401 SYSTEM SW	Q803 STB	D084 OFF MUTE								
B	IC501 DEFLECTION	Q804 H. P AMP	D211 AGC REDUCE								
	IC551 V OUT	Q805 PIN MOD	D220 PROTECT								
	IC801 +12V REG	Q811 PIN MOD OUT	D242 BRT ABL								
	IC802 +9V REG	Q1401 TV BUFF	D305 ACC								
	IC1401 R-G-B INTERFACE	Q1402 AV BUFF	D307 C OUT SW								
	IC1402 SIGNAL SW	Q1403 VIDEO BUFF-1	D341 H. P SLICE								
		Q1404 TEXT SYNC	D401 C SW								
C	Q001 VC CONV	Q1405 VIDEO BUFF	D430 D SYNC CLAMP								
	Q002 SOUND MUTE	Q1406 AV/TV SW	D501 BACK UP								
	Q005 RESP SW	Q1407 TV MUTE	D502 V SYNC								
	Q009 ST-BY SW	Q1408 VIDEO MUTE	D503 V HOLD								
	Q010 ON MUTE	Q1409 DC CLAMP									
	Q031 SYNC DETECT	Q1410 DC CLAMP	D551 PUMP UP								
	Q050 ON MUTE	Q1440 AV/TV SW	D801 PROTECT-1								
	Q055 HP INVERT	Q1441 BLK DELAY	D802 PROTECT-2								
D	Q056 COL CONT BUFF	Q1442 BLK DELAY	D811 PROTECT								
	Q063 OFF MUTE	Q1460 AWB DRIVE SW	D851 +200V RECT								
	Q081 +5V REG	Q1462 V DELAY BLK	D852 +1000V RECT								
	Q084 OFF MUTE DET	Q2408 TXT SW	D853 +15V RECT								
	Q201 BUFF		D854 +25V RECT								
	Q210 ON MUTE	D001 VOL D/A	D855 -30V RECT								
	Q242 PIC ABL	D003 COL D/A	D856 H CENT-1								
	Q243 BRT ABL	D004 PROTECT	D857 H CENT-2								
E	Q251 AUDIO MUTE	D006 KEY MATRIX-1	D1401 SYNC SW-1								
	Q272 VL SW	D007 KEY MATRIX-2	D1402 SYNC SW-2								
	Q273 VH SW	D008 KEY MATRIX-3	D1403 PROTECT								
	Q274 U SW	D010 KEY MATRIX-4	D1414 DC CLAMP-1								
	Q291 VC FILTER	D011 -30V REG	D1415 DC CLAMP-2								
	Q334 SECAM SW	D014 AGC REDUCE	D1431 TV/TEXT SW								
F	Q353 SYSTEM SW	D017 KEY MATRIX-5	D1441 BLK DELAY								
	Q354 COL SW-2	D025 RESET	D1464 DELAY BLK-1								
	Q380 PAL SW	D027 ON MUTE	D1465 DELAY BLK-2								
	Q387 COL DET	D029 AFT LED									
	Q388 COL MUTE	D030 STBY LED	D1467 PIC CONT								

5-2. CIRCUIT BOARDS LOCATION



- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. k: 1000 Ω , M: 1000 k Ω
 - : nonflammable resistor.
 - : internal component.
 - : panel designation.
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 - Readings are taken with a 10 M Ω digital multimeter.
 - Readings are taken with a color-bar signal input.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken with a color-bar signal input. no mark: with PAL color-bar signal received. () : with SECAM color-bar signal received.
 - : adjustment for repair.
 - : B+ bus.
 - : B- bus.
 - : signal path.

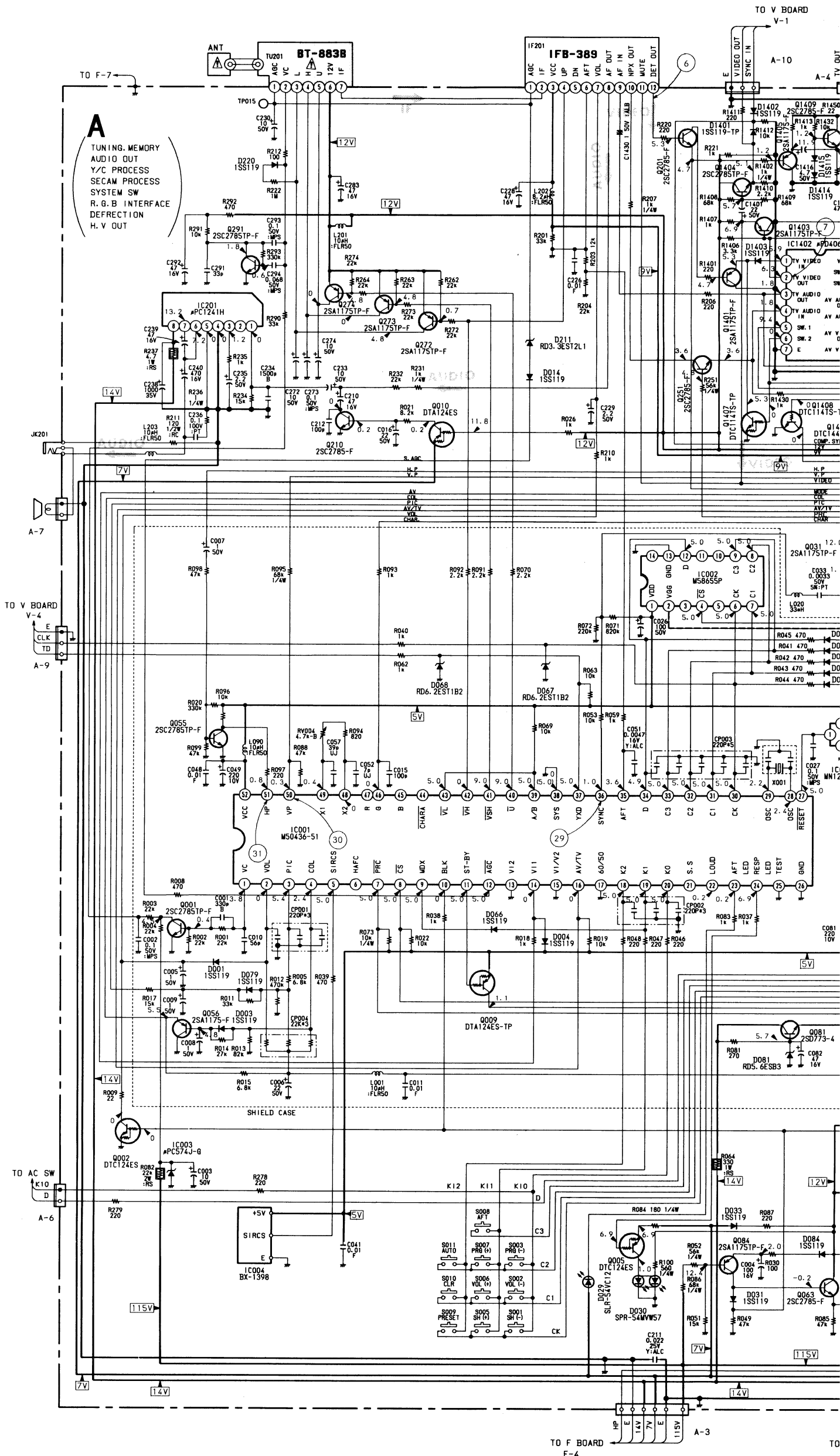
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

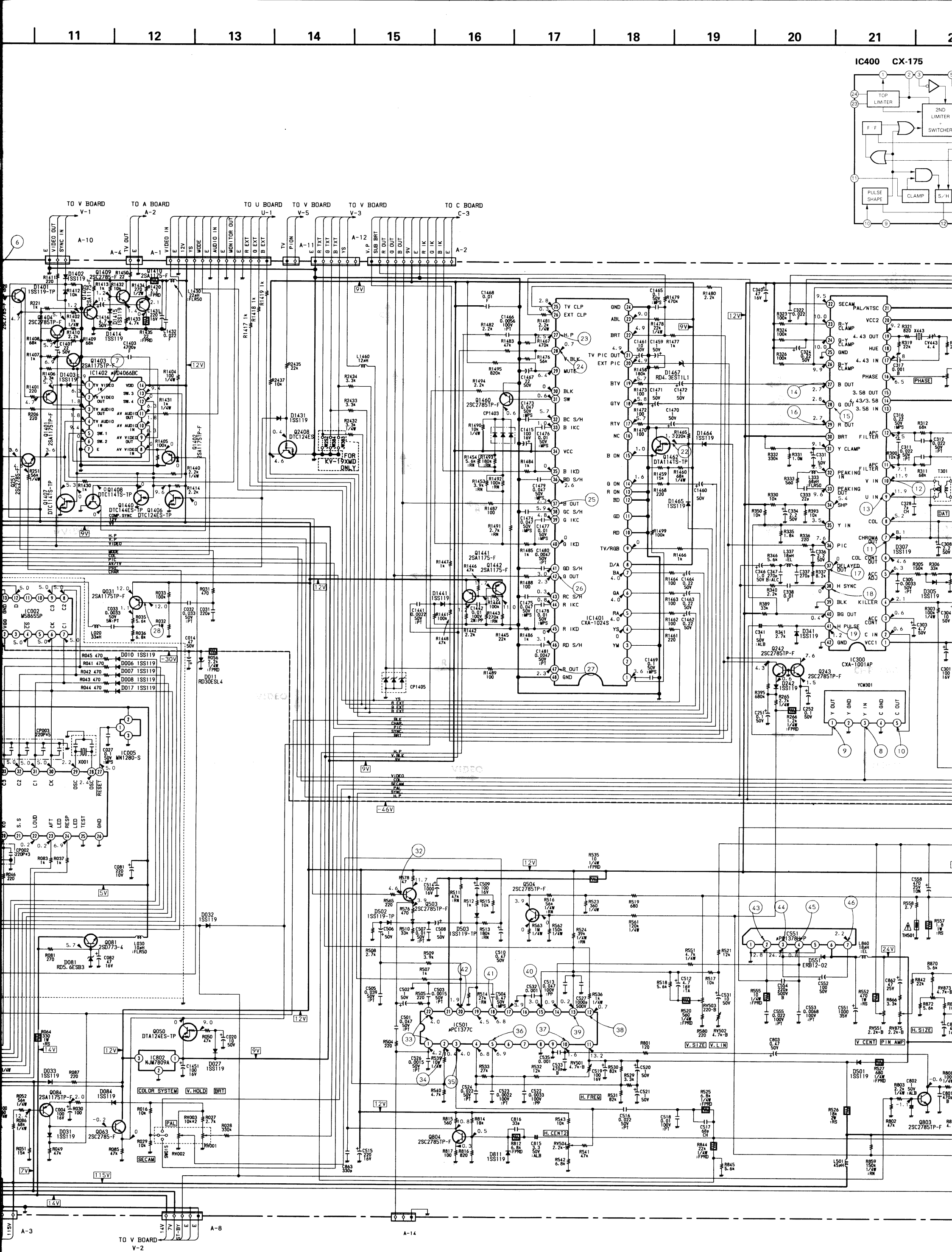
Reference information

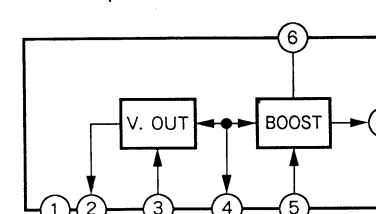
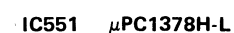
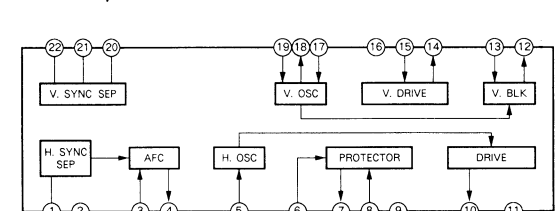
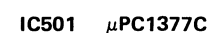
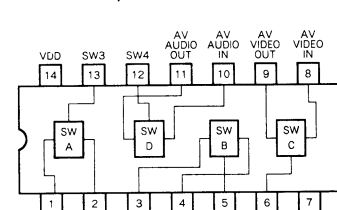
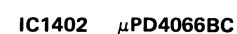
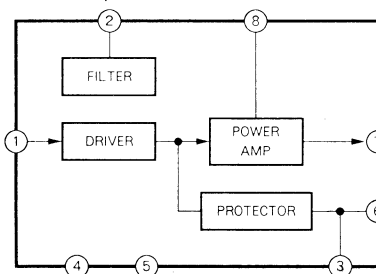
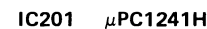
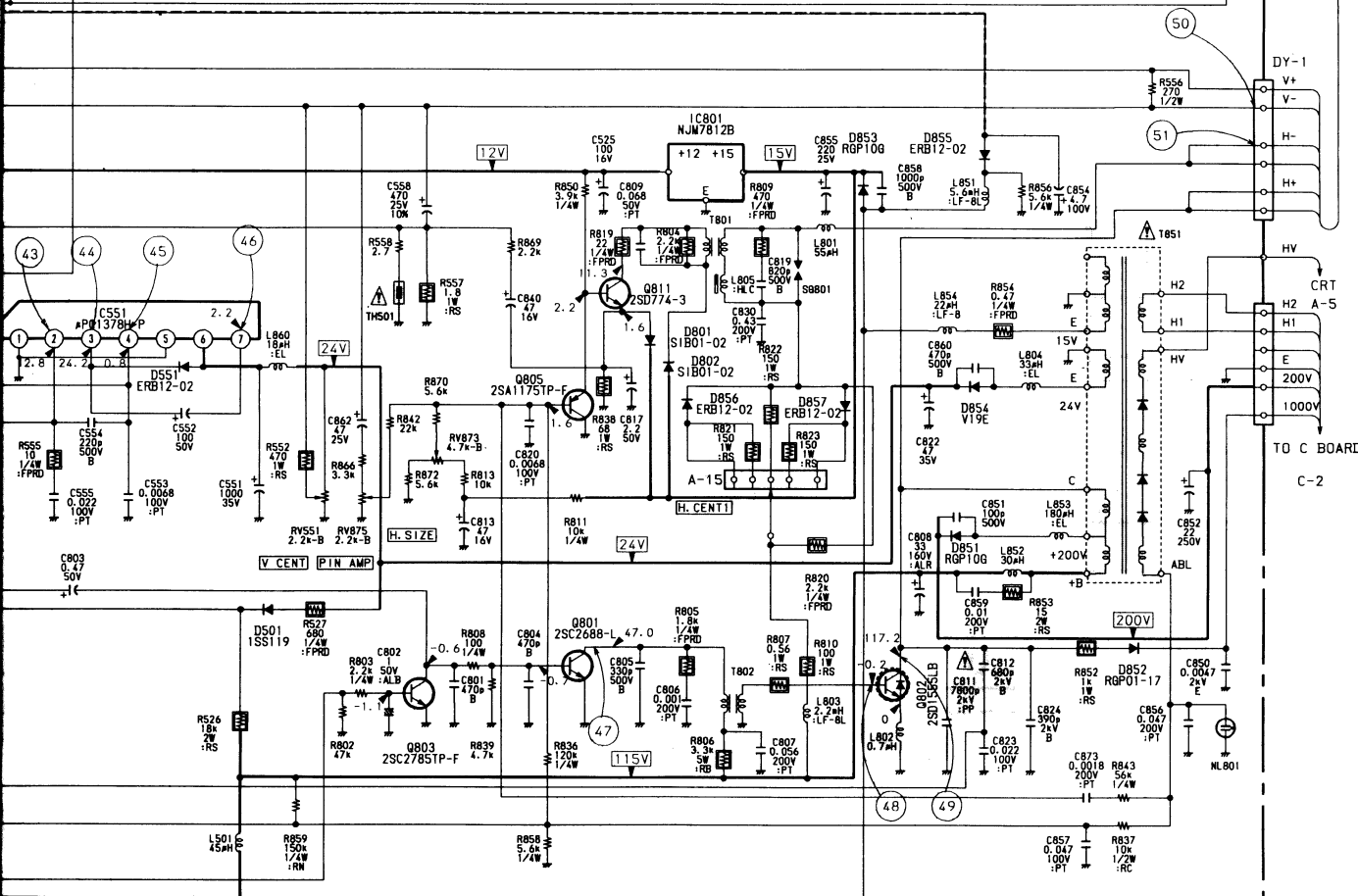
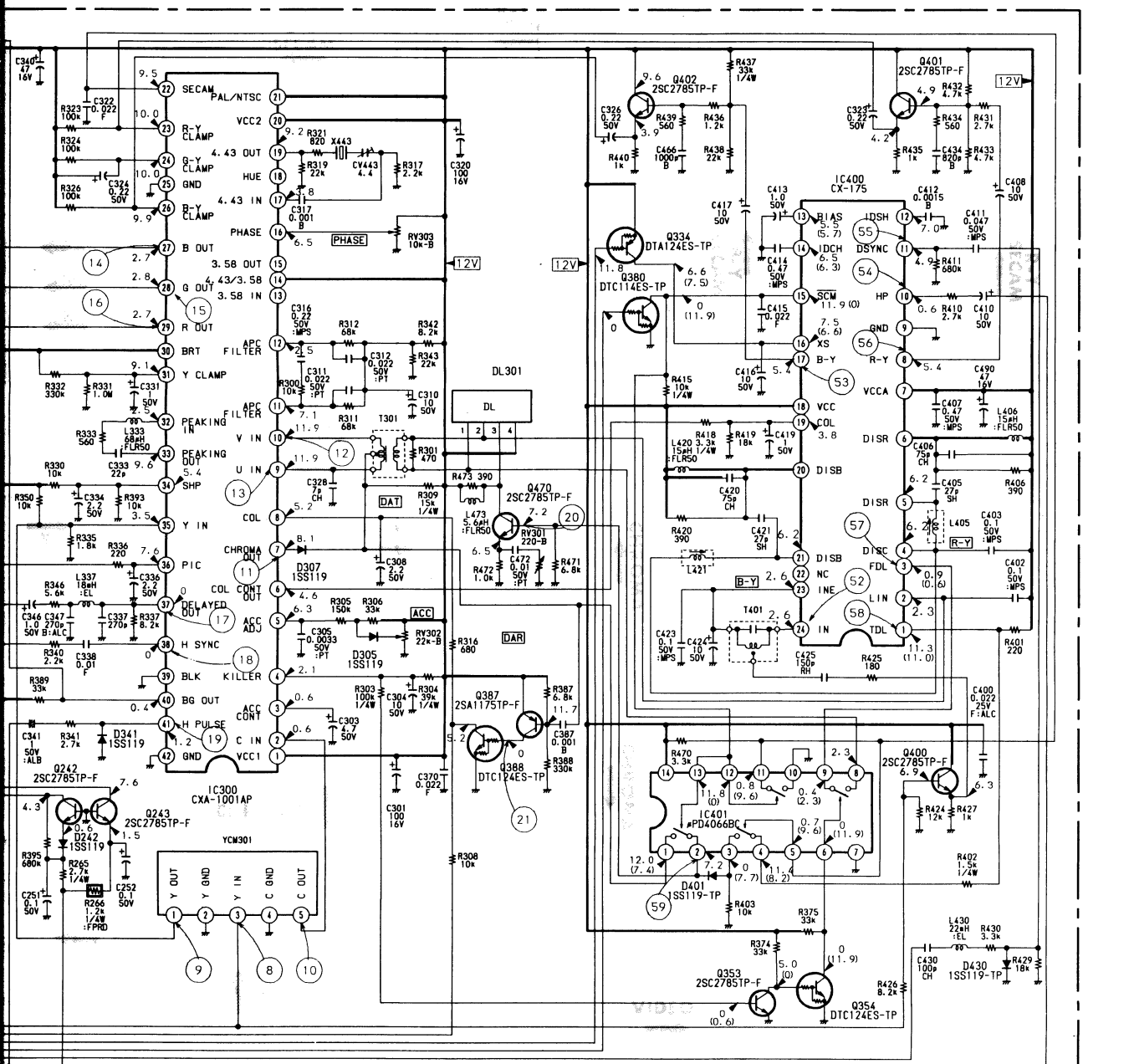
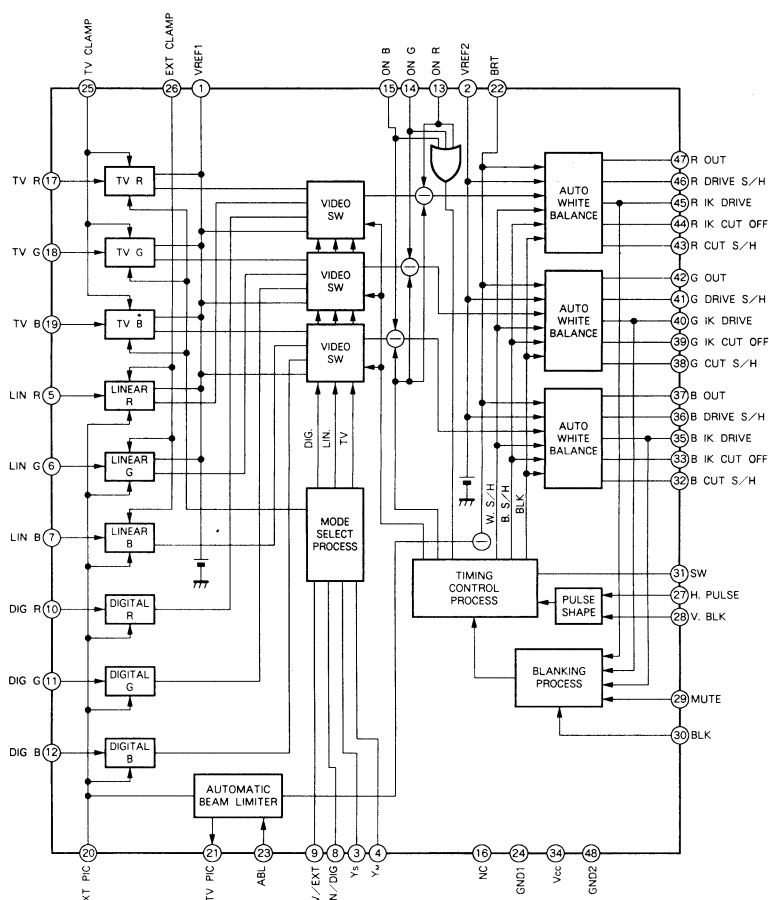
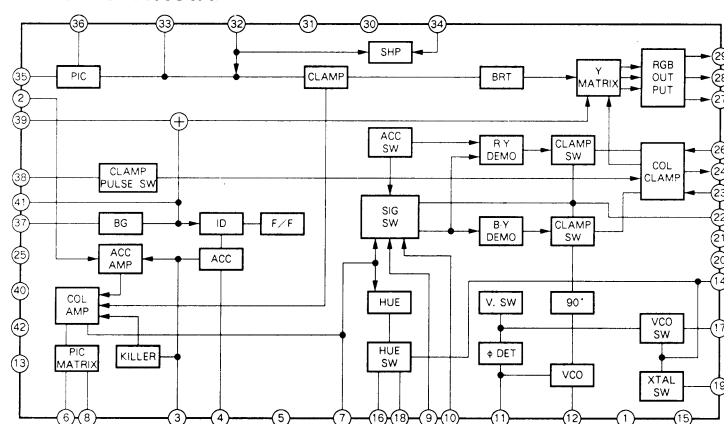
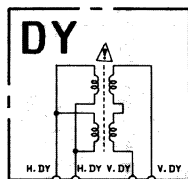
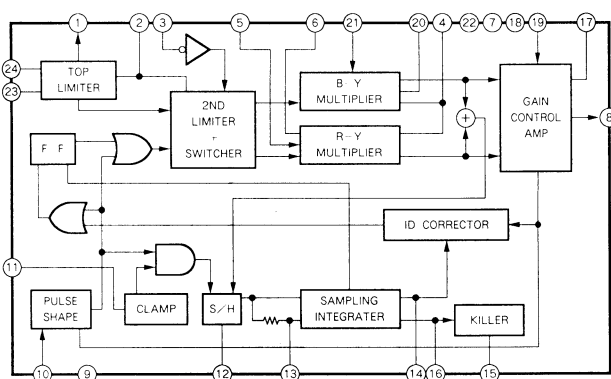
- RESISTOR :** RN METAL FILM
RC SOLID
FPRD NONFLAMMABLE CARBON
FUSE NONFLAMMABLE FUSIBLE
RS NONFLAMMABLE WIREWOUND
RB NONFLAMMABLE CEMENT
- COIL :** LF-8L MICRO INDUCTOR
- CAPACITOR:** TA TANTALUM
PS STYROL
PP POLYPROPYLENE
PT MYLAR
MPS METALIZED POLYESTER
MPP METALIZED POLYPROPYLENE
ALB BIPOLAR
ALT HIGH TEMPERATURE
AIR HIGH RIPPLE

• BT883

Terminal	Band	VHF LOW	VHF HIGH	UHF
L		+12V	0.2 or less	0.2 or less
H		0.2 or less	+12V	0.2 or less
U		0.2 or less	0.2 or less	+12V
+B			+12V	
VC		1.4 - 21V	1.5 - 24V	1.5 - 25V
AGC		8.5V (Gain MAX) - 0.5V		





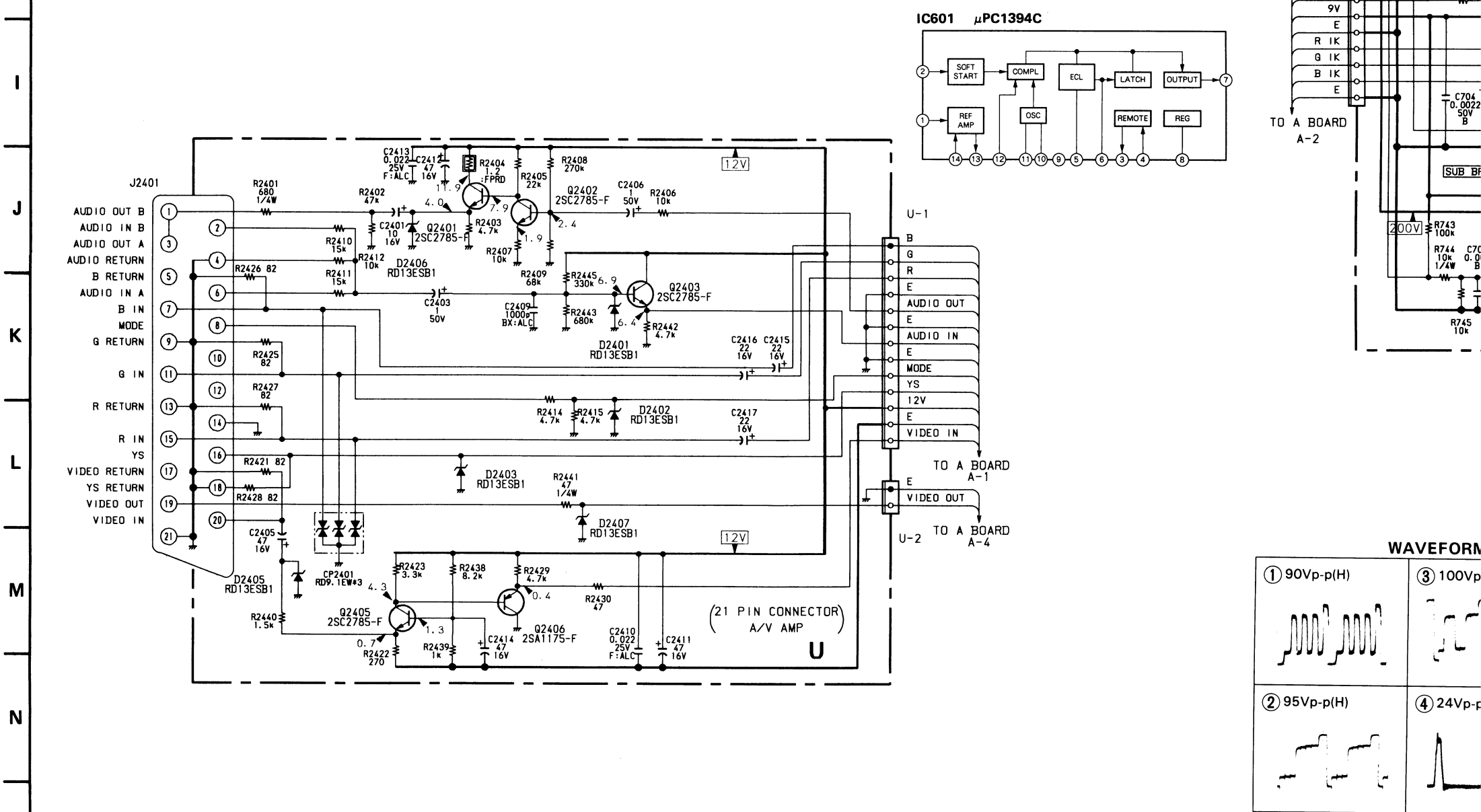
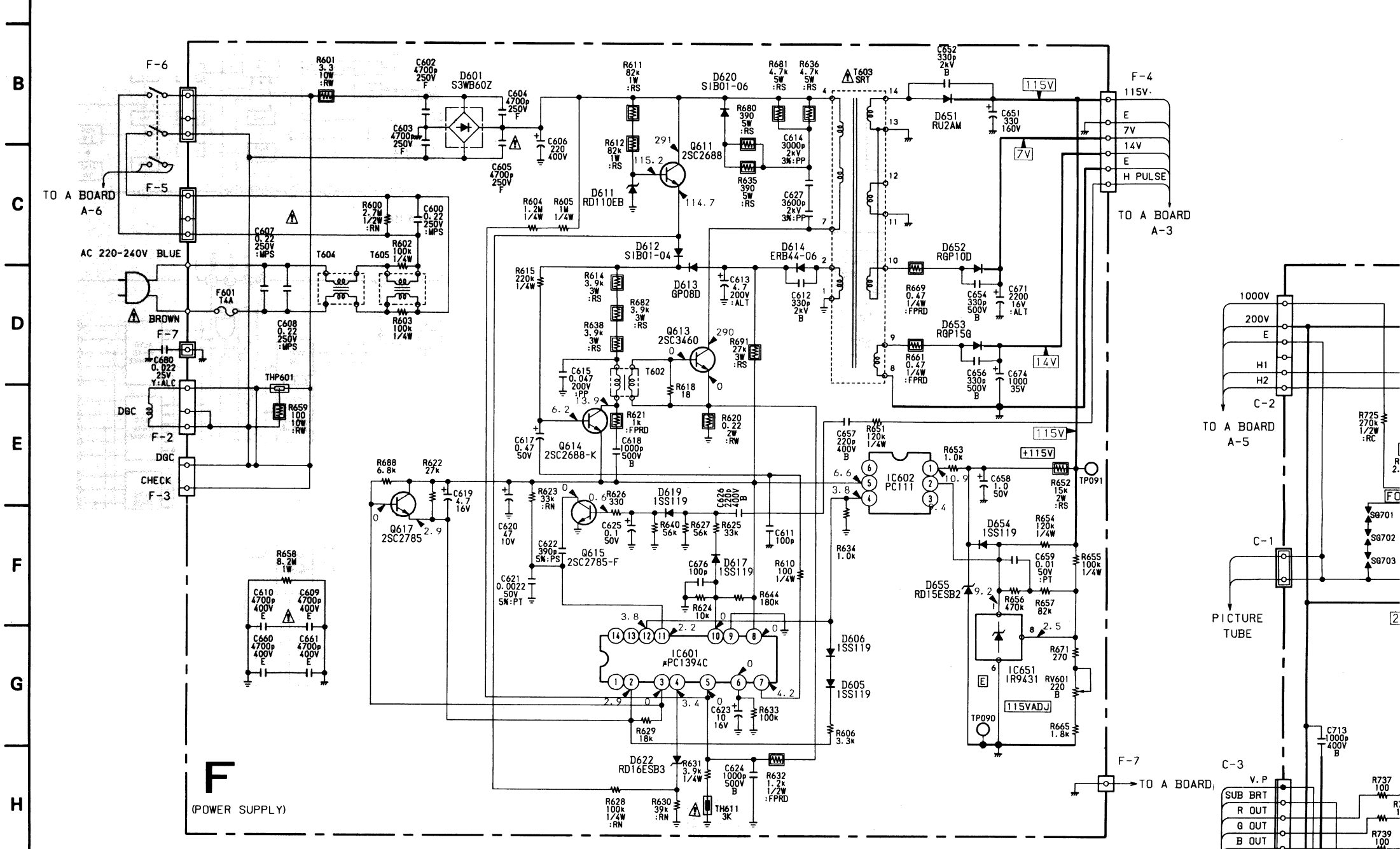


F BOARD

IC601	REG CONT	Q611	START	Q617	SOFT START	D606	PROTECT-3	D614	DRIVE RECT	D622	LOW VOLTAGE	D654	PROTECT-1
IC602	ISOLATION	Q613	CONV TR			D611	START	D617	H PULSE RECT	D651	+B RECT	D655	SHUNT REG
IC651	SHUNT REG	Q614	DRIVE	D601	LINE RECT	D612	START	D619	H PULSE RECT	D652	+7V RECT		
		Q615	FO-SHIFT	D605	PROTECT-2	D613	BACK UP	D620	AC CLIPPER	D653	AUDIO 15V RECT		

C BOARD

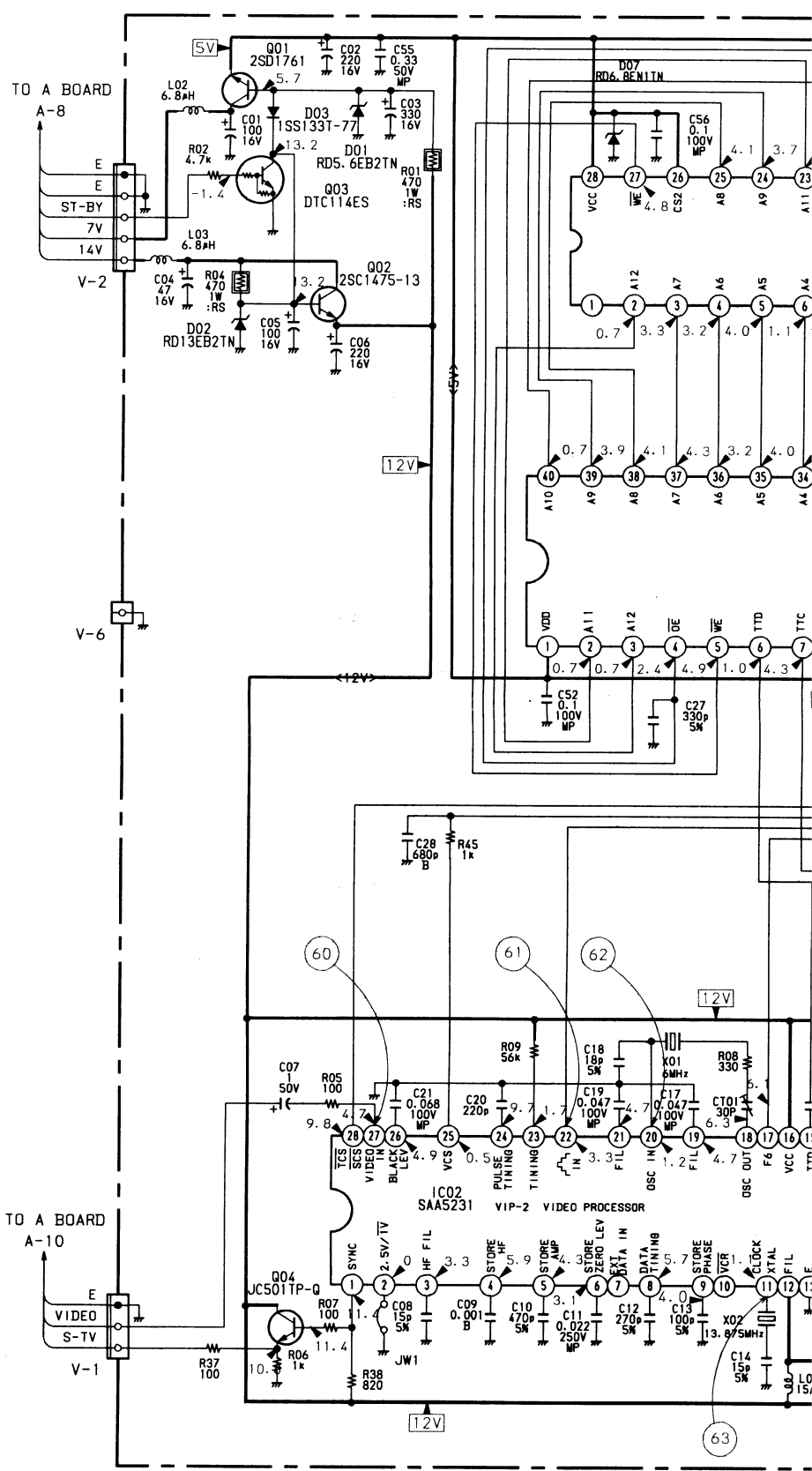
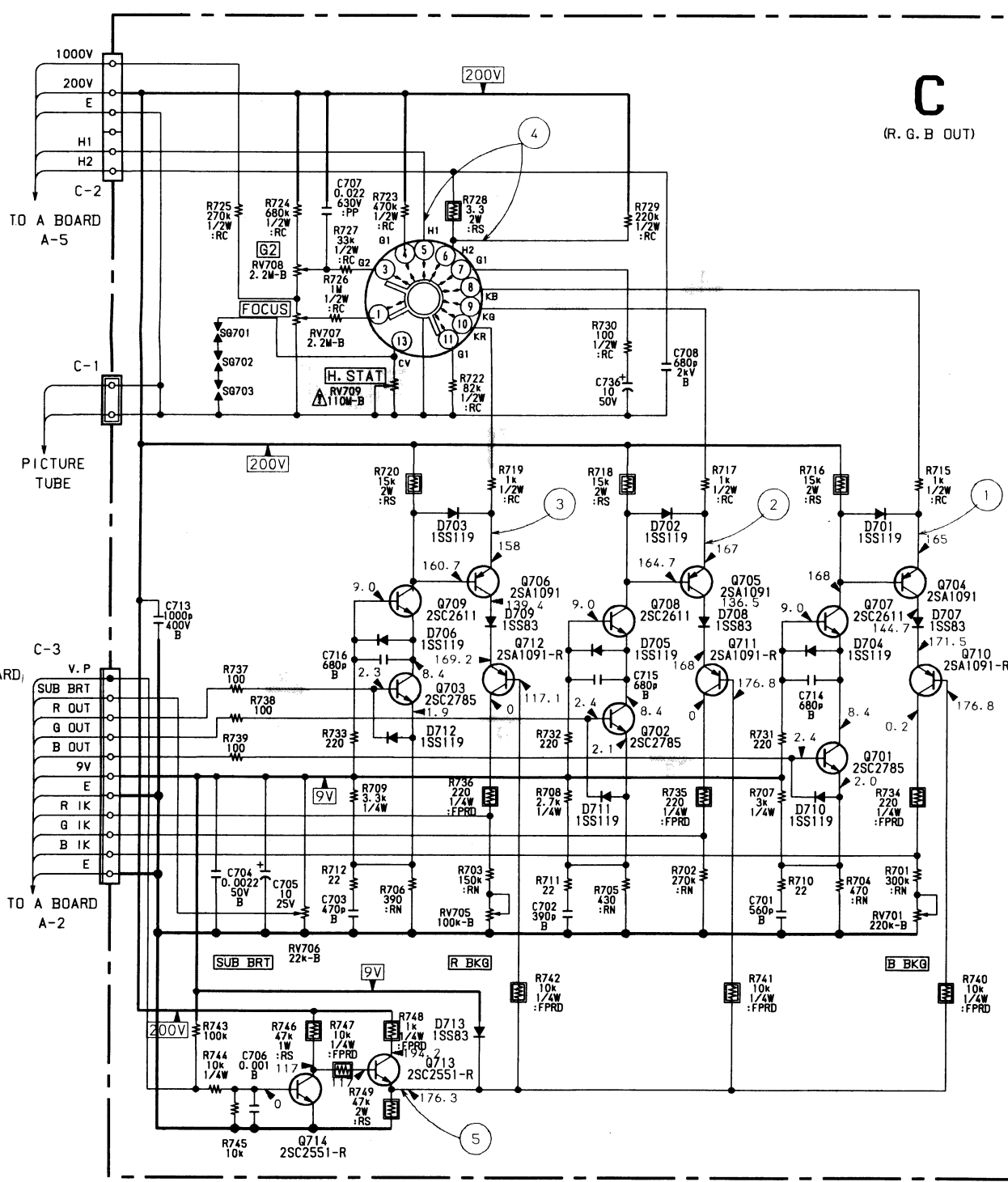
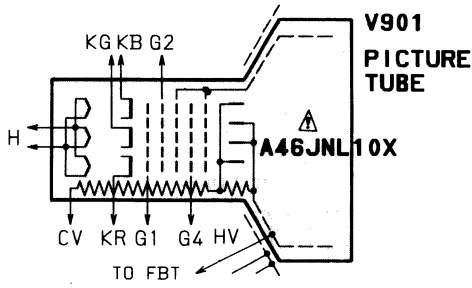
Q701	B AMP-1	Q705	G K
Q702	G AMP-1	Q706	R I K
Q703	R AMP-1	Q707	B A
Q704	B I K DETECT	Q708	G A

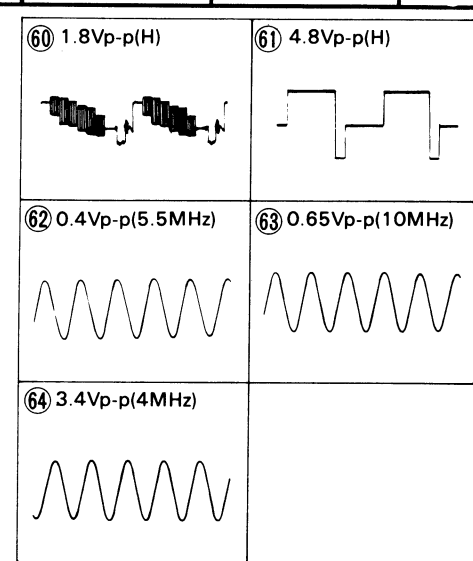


U BOARD										
Q2401	AUDIO OUT	Q2406	VIDEO IN BUFF	D2403	PROTECT-3					
Q2402	AUDIO AMP			D2404	PROTECT-4					
Q2403	AUDIO IN BUFF	D2401	PROTECT-1	D2405	PROTECT-5					
Q2405	VIDEO IN AMP	D2402	PROTECT-2	D2406	PROTECT-6					

MC-Service

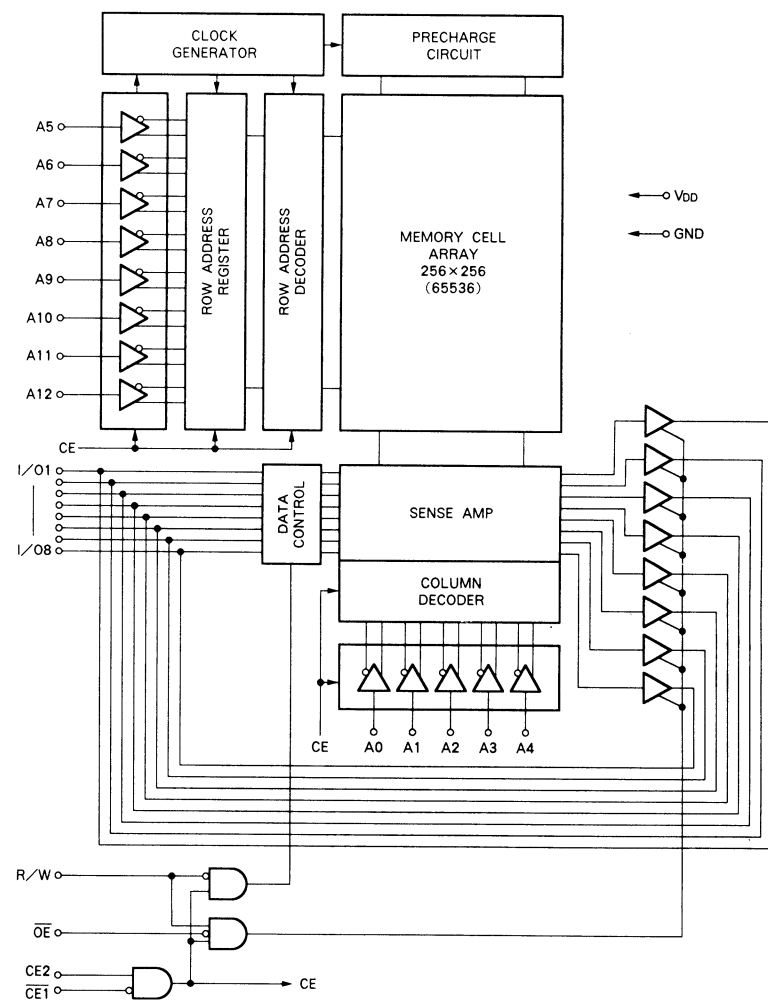
11		12		13		14		15		16		17	
C BOARD													
Q701	B AMP-1	Q705	G/K DETECT	Q709	R AMP-2	Q713	SW BUFF	D702	PROTECT-2	D706	PROTECT-6	D710	PROTECT-7
Q702	G AMP-1	Q706	R/K DETECT	Q710	B SW	Q714	SW INV	D703	PROTECT-3	D707	B. /K SW	D711	PROTECT-8
Q703	R AMP-1	Q707	B AMP-2	Q711	G SW			D704	PROTECT-4	D708	G. /K SW	D712	PROTECT-9
Q704	B/K DETECT	Q708	G AMP-2	Q712	R SW	D701	PROTECT-1	D705	PROTECT-5	D709	R. /K SW	D713	CLAMP

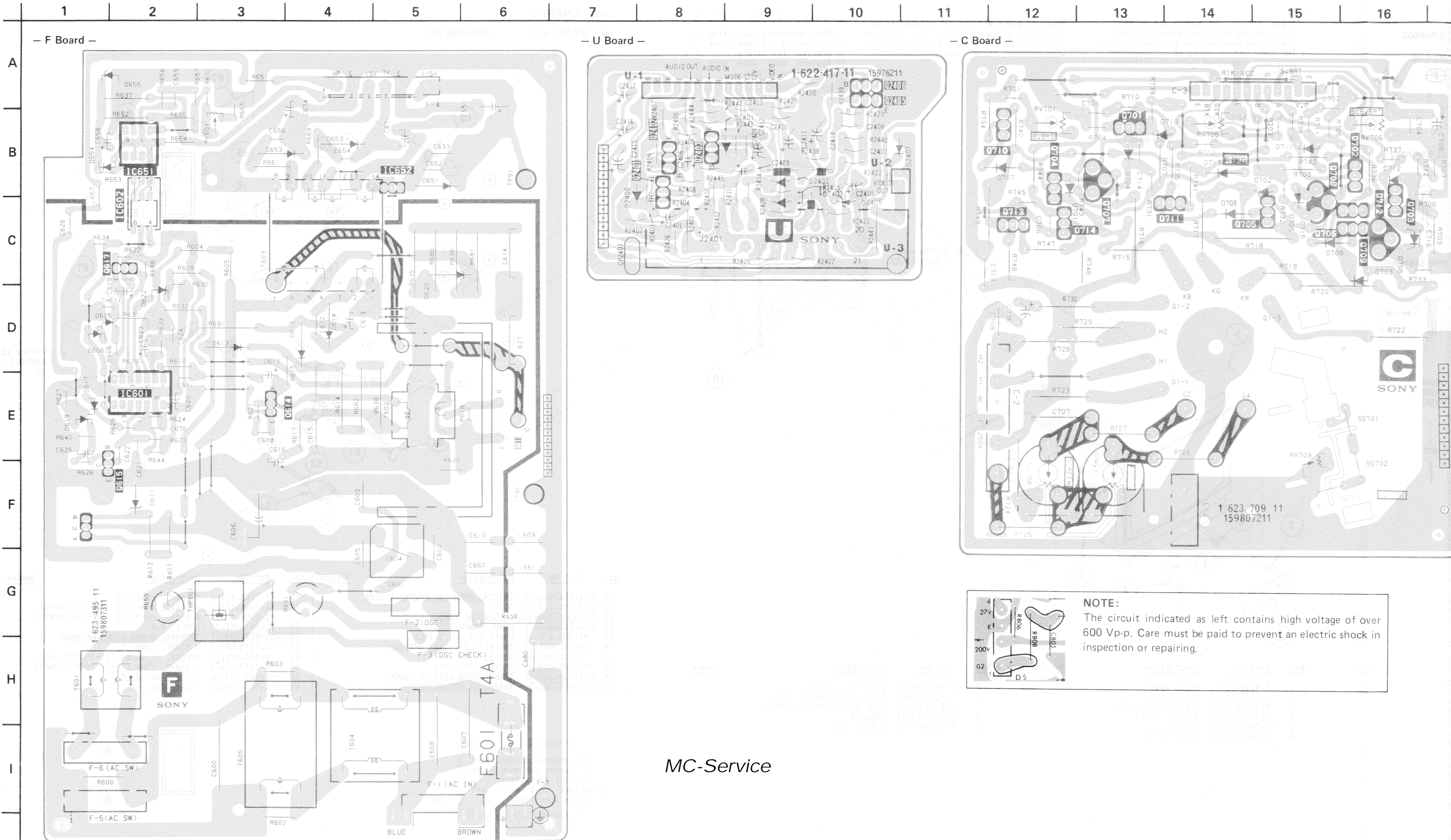




WAVEFORMS V BOARD

MC-Service



F [REG CONT, ISOLATION,
SHUNT REG, LINE RECT]**U** [AUDIO OUT, VIDEO IN AMP]**C** [R-G-B AMP]SECTION 6
EXPLODED VIEWS

C

[R-G-B AMP]

V

[TELETEXT]

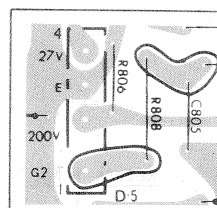
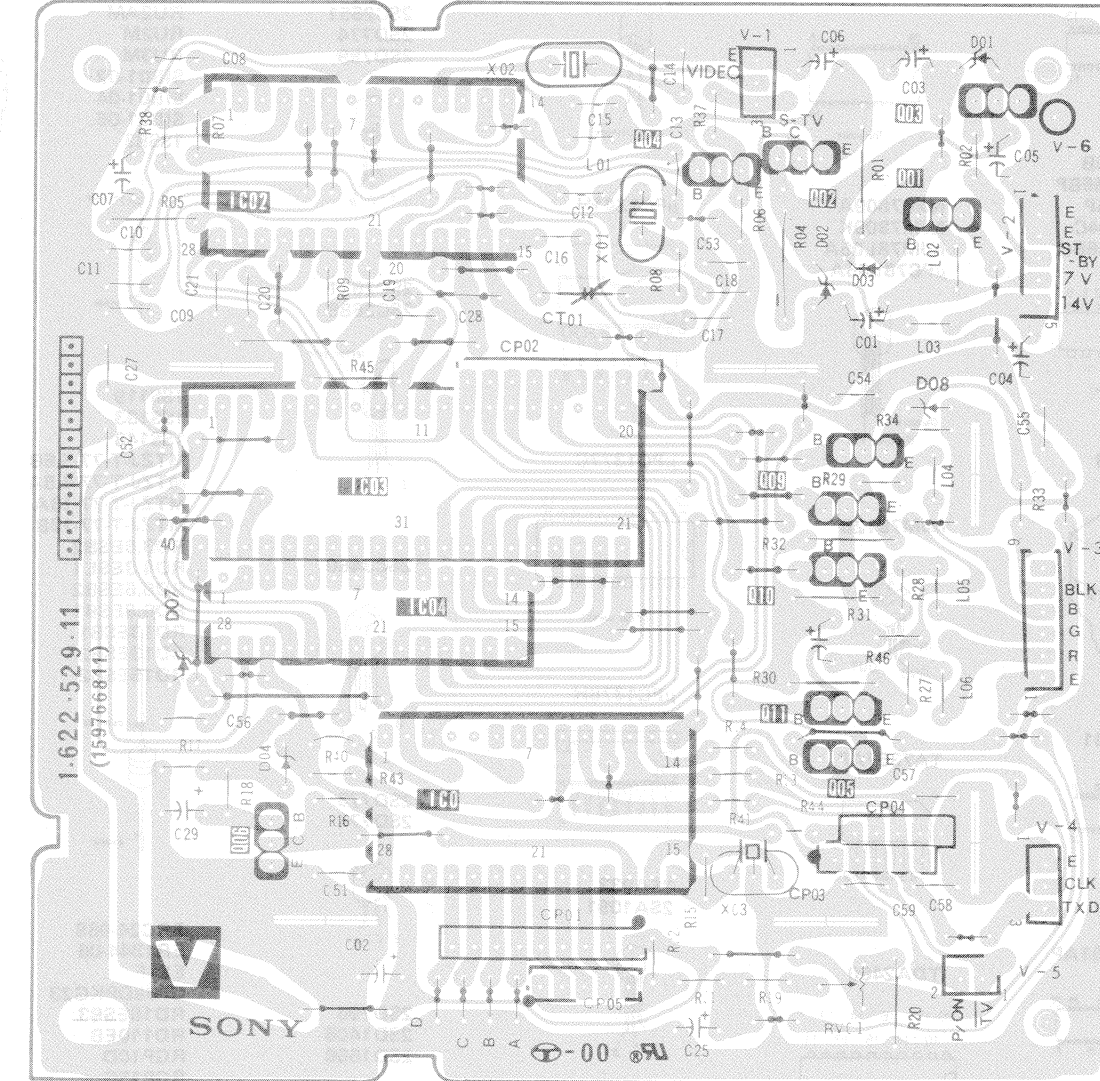
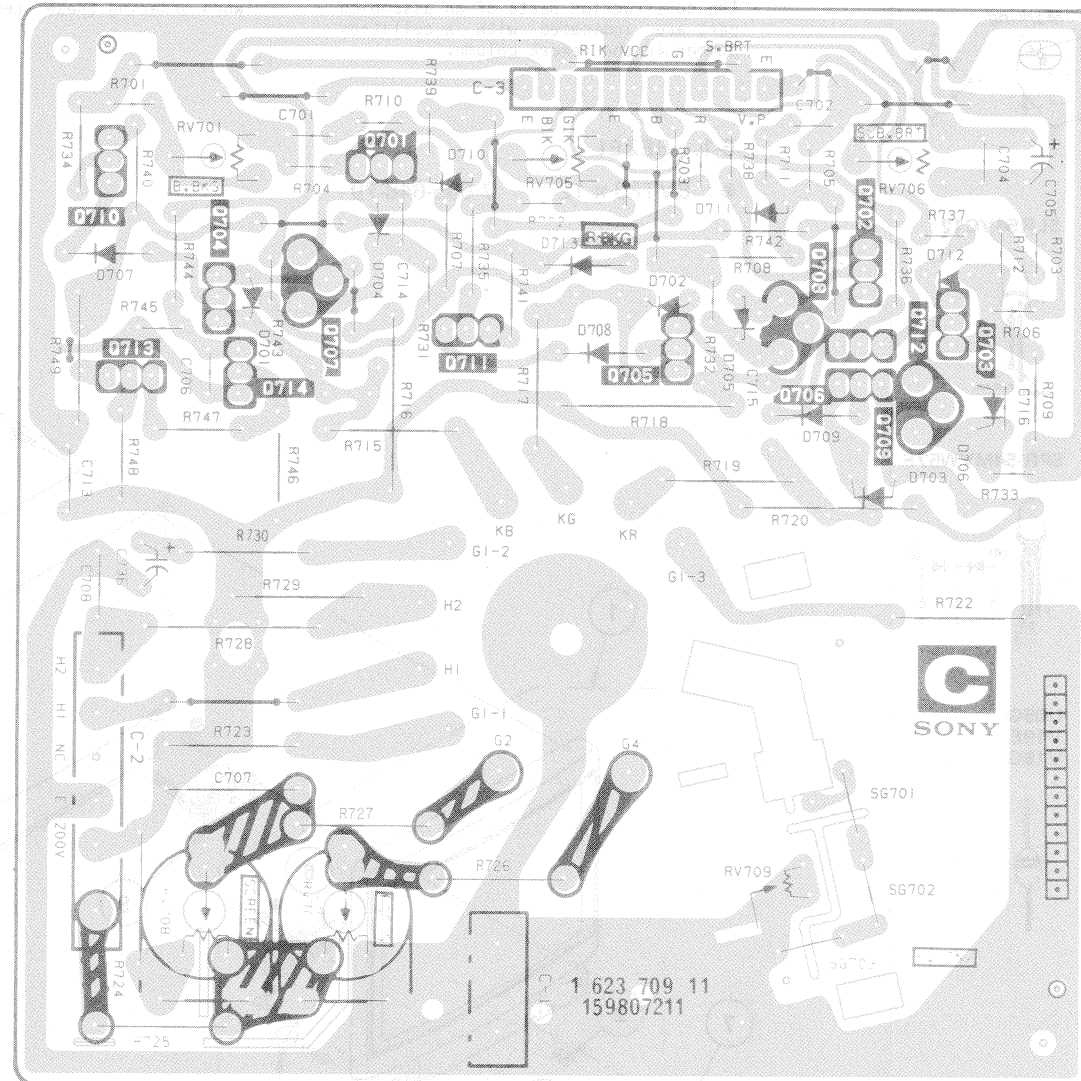
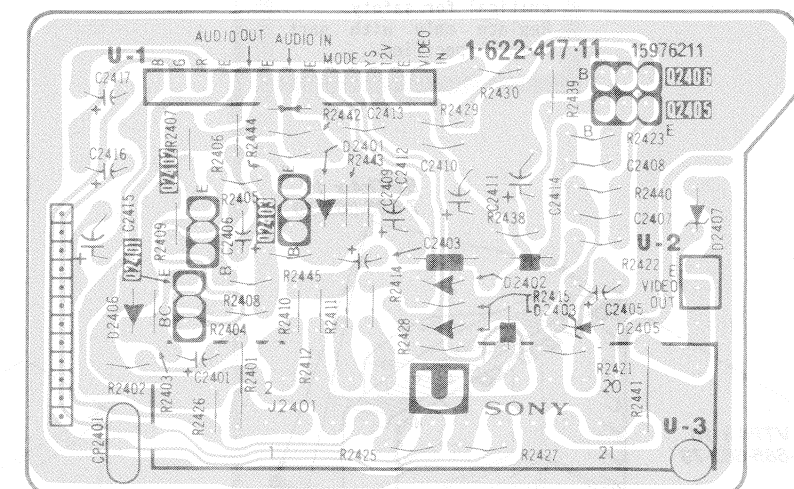
VIDEO IN AMP]

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

- U Board -

- C Board -

- V Board - (KV-19XMTD only)



NOTE:

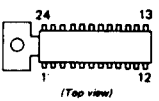
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

MC-Service

SECTION 6
EXPLODED VIEWS

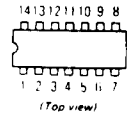
5-4. SEMICONDUCTORS

CX175



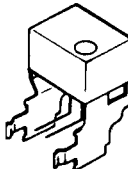
(Top view)

BU4066B
HD14066BP
M58655P
μPC1394C
μPD4066BC

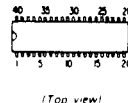


(Top view)

BX1398

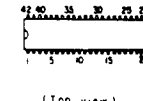


SAA5241



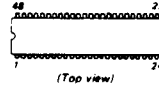
(Top view)

CXA1001AP



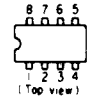
(Top view)

CXA1024S



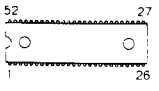
(Top view)

IR9431



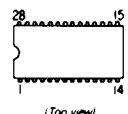
(Top view)

M50436-515SP



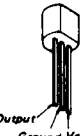
TOP VIEW

SAA5231
μPD4364CX-15L



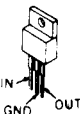
(Top view)

NJM7809A
NJM7809K
NJM78L05A
μPC78L05A




Output
Ground Vcc

NJM7812B



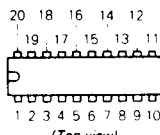
IN
GND
OUT

TA7357AP



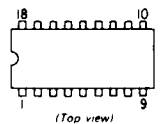
1 2 3 4 5 6 7 8 9

TDA2460



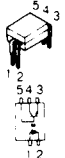
(Top view)

TDA4429T



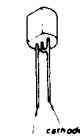
(Top view)

TLP581



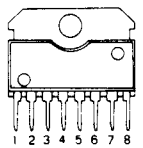
(Top view)

μPC574J



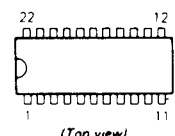
anode cathode

μPC1241H



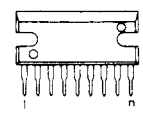
1 2 3 4 5 6 7 8

μPC1377C




(Top view)

μPC1378H




1 2 3 4 5 6 7 8 9 10 11 12

2SA933
2SA1091



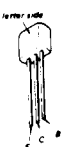
E C B

2SA1048
2SA1115
2SC1740
2SC2458
2SC2603
DIC114ES
DTC124ES




E C B

2SA1175
2SC2785



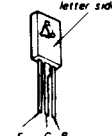
letter side
E C B

2SC1475
2SC2060
2SC2551
2SD774
2SD789




E C B

2SC2611
2SC2688



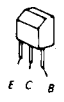
letter side
E C B

2SC3460



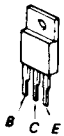
B C E

2SD773
2SD774



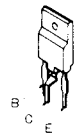
E C B

2SD795
2SD1406
2SD1666



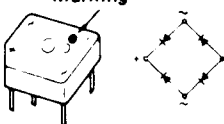
B C E

2SD1555




B C E

ERC24-06S
RH-1A
RU2AM
RU2M
RU3M
SIB01-02
SIB01-04
SIB01-06
1SS83



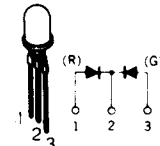
Marking

SLR54VC12




anode cathode

SPR-54MVW57F




(R) (G)
1 2 3

U05G
V19E
V19G




cathode
anode

ERC24-06S
ER1344-06
ES1F
GP08DPKG23
RD16ESB3
RD110EB
RGP10D
RGP15G
10E2



cathode
anode


RB406NH



Marking

NOTE:
• Items with no part number and no description are not stocked because they are seldom required for routine service.
• The construction parts of an assembled part are indicated with a collation number in the remark column.

• Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

6-1. BEZEL
●: BVTP3 x 12 7-685-648-79

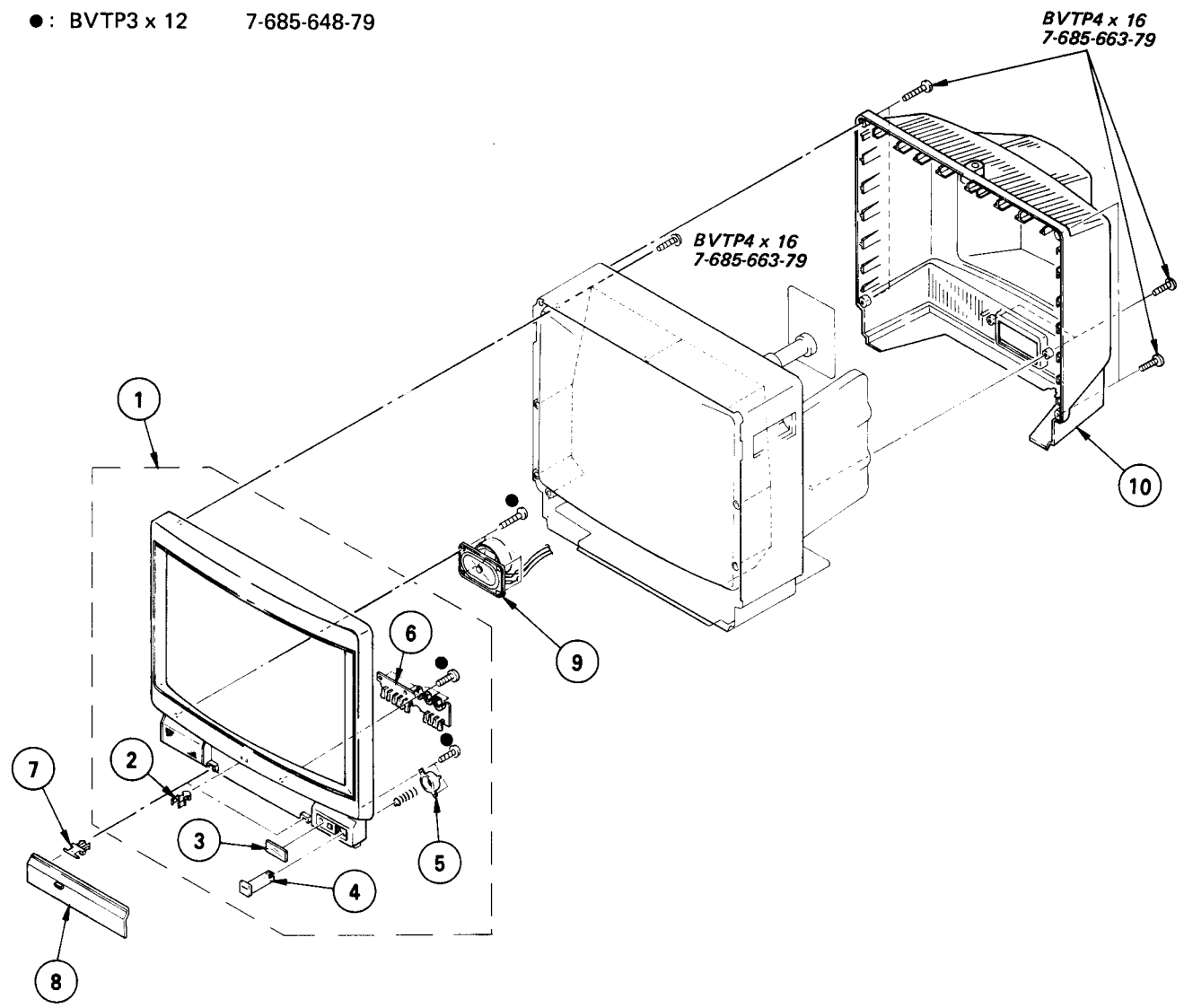


Diagram showing exploded views of the bezel assembly. Components are numbered 1 through 10. Callouts include: BVTP4 x 16 7-685-663-79, BVTP4 x 16 7-685-663-79, and BVTP4 x 16 7-685-663-79.

No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-4386-631-1	BEZEL ASSY		7	3-662-365-00	SHAFT (S), DOOR	
2	4-374-714-01	CATCH, PUSH		8	X-4386-630-1	DOOR ASSY (FOR KV-19XMD)	
3	4-386-670-01	PLATE, TRANSPARENT			X-4386-629-1	DOOR ASSY (FOR KV-19XMTD)	
4	4-385-506-01	BUTTON, POWER		9	1-503-258-21	SPEAKER	
5	★4-385-505-01	HOLDER		10	4-386-677-01	COVER, REAR	
6	4-386-672-01	PUSH BUTTON					

6-2. BY
●: BV

No.	Description
51	▲.1
52	▲.4
53	▲.4
54	▲.1
55	▲.4
56	▲.4
57	▲.4
58	▲.4
59	▲.1
60	▲.1

The by cri Rep num

MC-Service

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—33—


SECTION 6

EXPLODED VIEWS

NOTE:

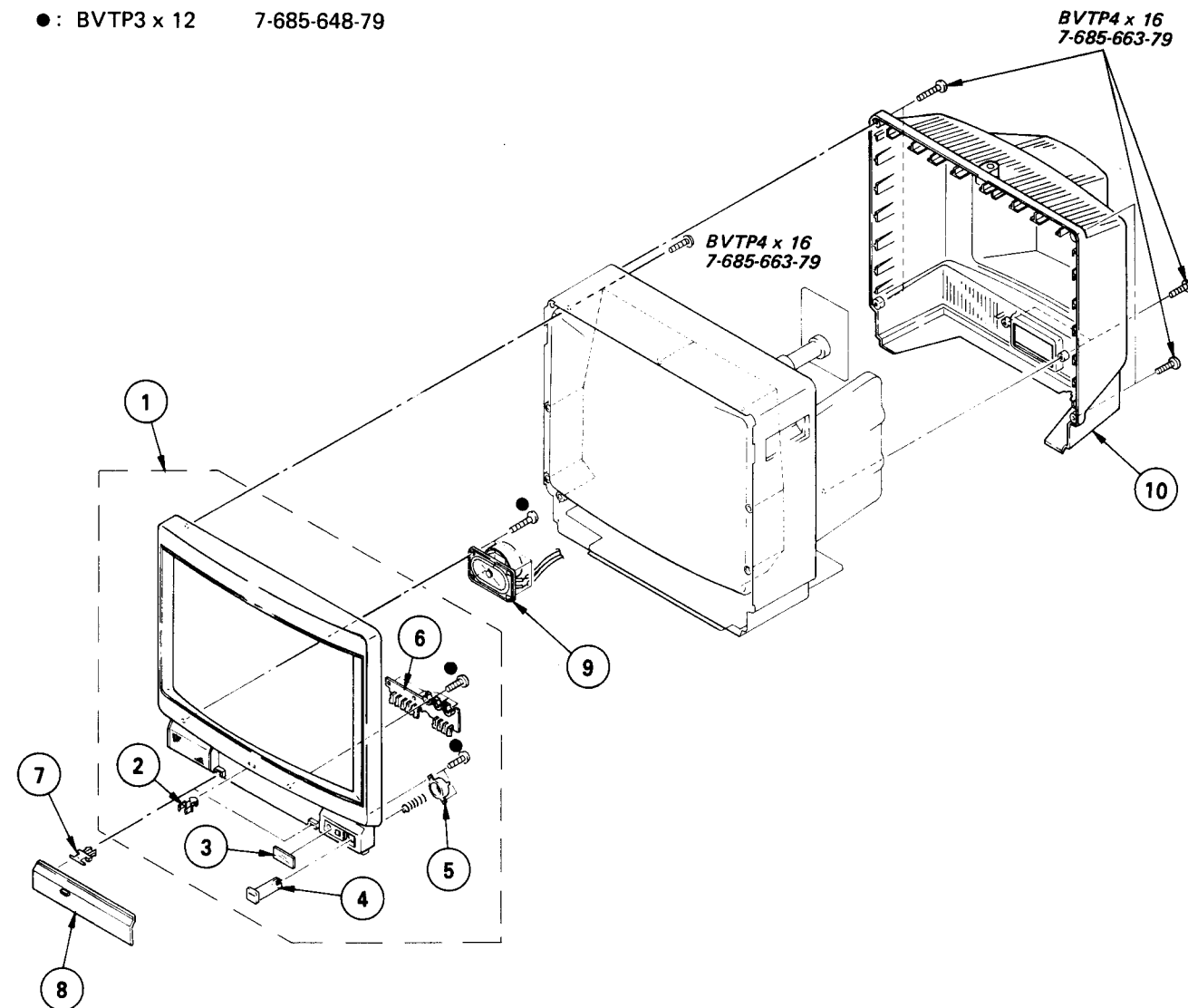
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

6-1. BEZEL

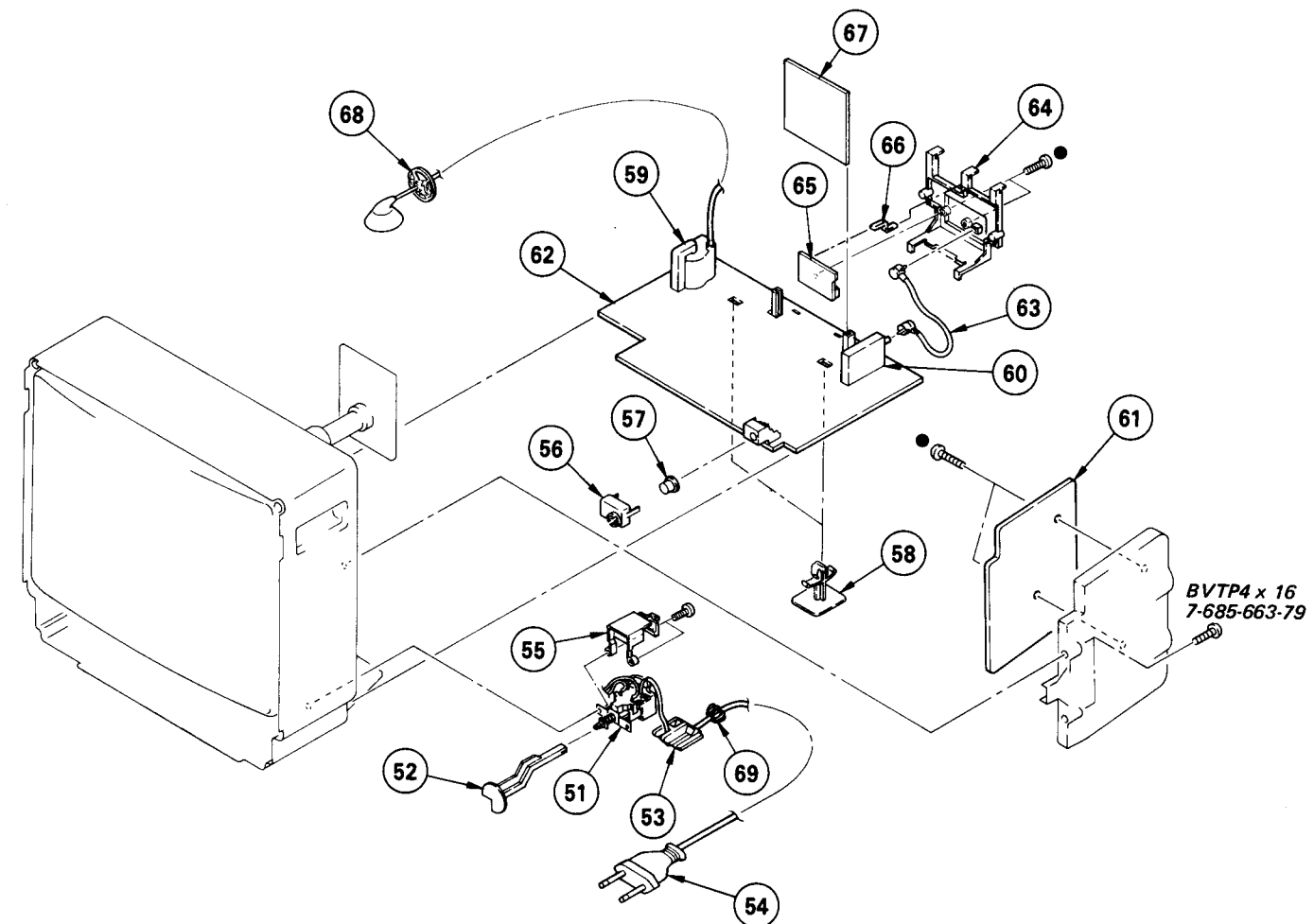
●: BVTP3 x 12 7-685-648-79










No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-4386-631-1	BEZEL ASSY		7	3-662-365-00	SHAFT (S), DOOR	
2	4-374-714-01	CATCH, PUSH		8	X-4386-630-1	DOOR ASSY (FOR KV-19XMD)	
3	4-386-670-01	PLATE, TRANSPARENT			X-4386-629-1	DOOR ASSY (FOR KV-19XMTD)	
4	4-385-506-01	BUTTON, POWER		9	1-503-258-21	SPEAKER	
5	*4-385-505-01	HOLDER		10	4-386-677-01	COVER, REAR	
6	4-386-672-01	PUSH BUTTON					

6-2. CHASSIS

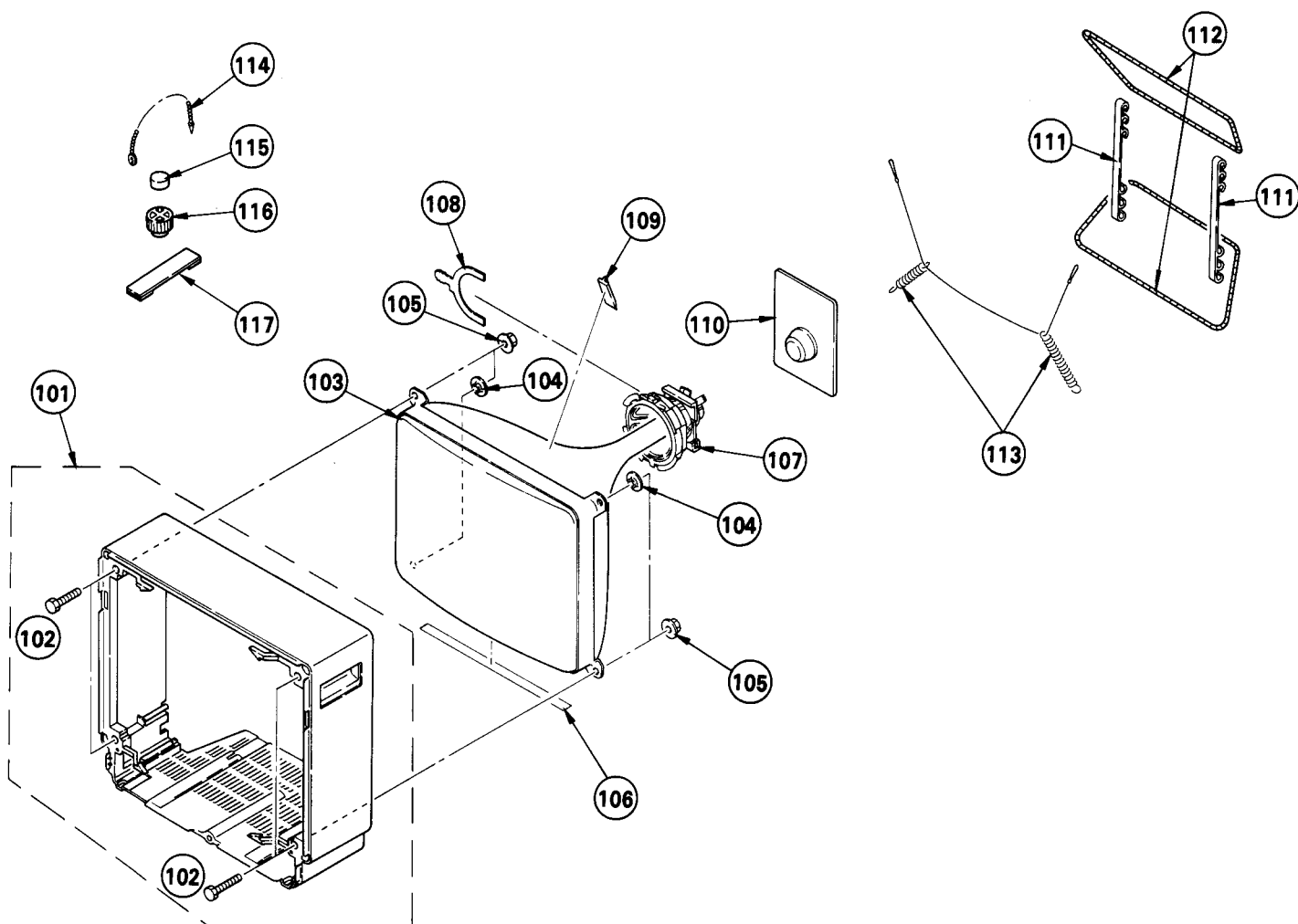
●: BVTP3 x 12 7-685-648-79



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	 1-554-966-12	SWITCH, PUSH (AC POWER)(1 KEY)		61	*A-1245-417-A	F BOARD, COMPLETE	
52	4-385-503-01	JOINT		62	*A-1296-371-A	A BOARD, COMPLETE (FOR KV-19XMD)	
53	 4-374-307-01	HOLDER, AC CORD			*A-1296-370-A	A BOARD, COMPLETE (FOR KV-19XMTD)	
54	 1-534-817-71	CORD, POWER		63	*1-557-241-31	CABLE, P-P	
55	*4-380-972-11	COVER (C), AC SWITCH		64	 1-537-097-11	TERMINAL BOARD ASSY, ANTENNA	
56	*4-381-686-01	BRACKET (B), BAR, OPTICAL		65	*A-1373-084-A	U BOARD, COMPLETE	
57	*4-374-987-01	GUIDE, LIGHT		66	*4-386-671-01	HOLDER, PC BOARD (KV-19XMTD ONLY)	
58	*4-382-683-01	ANCHOR, PC BOARD		67	*A-1347-018-A	V BOARD, COMPLETE (KV-19XMTD ONLY)	
59	 1-439-363-11	TRANSFORMER ASSY, FLYBACK		68	*4-369-234-01	HOLDER, HV CABLE	
60	 1-463-761-11	TUNER, ET (BT-883B)		69	1-543-179-00	CORE, RING	

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

6-3. PICTURE TUBE



No.	Part No.	Description
101	X-4385-503-5	CABINET ASSY
102	3-703-025-12	BOLT M5, HEXAGON-HEAD
103	A-8-737-951-05	PICTURE TUBE (A46JNL10X)
104	4-373-615-02	WASHER, CRT POSITIONING
105	4-306-034-00	FLANGE NUT, (B) 5MM
106	4-372-556-11	CLOTH, BLOTTING
107	A-1-451-279-21	DEFLECTION YOKE (SY165)
108	1-452-277-00	MAGNET, BMC
109	3-703-003-00	SPACER, DY

Remark	No.	Part No.	Description	Remark
102	110	*A-1330-805-A	C BOARD, COMPLETE	
	111	*4-380-620-01	BAND, DEGAUSS COIL	
	112	A-1-426-331-11	COIL, DEMAGNETIZATION	
	113	*4-376-036-01	SPRING, TENSION	
	114	4-308-870-00	CLIP, LEAD WIRE	
	115	1-452-032-00	MAGNET, DISK; 10MM ϕ	
	116	1-452-094-00	MAGNET, ROTABLE DISK; 15MM ϕ	
	117	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	

MC-Service

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

F

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

• Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS

- MF : μ F, PF : μ PF

RESISTORS

- All resistors are in ohms
- F : nonflammable

COILS

- MMH : mH, UH : μ H

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	*A-1245-417-A	F BOARD, COMPLETE *****		D611	8-719-118-34	DIODE RD110EB	
	*4-341-752-01	EYELET		D612	8-719-924-06	DIODE ERC24-06S	
	*4-363-146-00	HEAT SINK, V.OUT		D613	8-719-911-55	DIODE U05G	
	4-363-414-00	SPACER, MICA		D614	8-719-924-06	DIODE ERC24-06S	
	*4-370-012-01	HOLDER, TRANSISTOR		D617	8-719-911-19	DIODE 1SS119	
	4-386-697-01	SPACER, MICA		D619	8-719-911-19	DIODE 1SS119	
		CAPACITOR		D620	8-719-924-06	DIODE ERC24-06S	
C600	Δ 1-136-360-51	FILM 0.22MF	20% 250V	D622	8-719-110-46	DIODE RD16ES-83	
C602	Δ 1-161-964-61	CERAMIC 0.0047MF	250V	D651	8-719-302-00	DIODE RU-2M	
C603	Δ 1-161-964-61	CERAMIC 0.0047MF	250V	D652	8-719-300-76	DIODE RH-1A	
C604	Δ 1-161-964-61	CERAMIC 0.0047MF	250V	D653	8-719-921-53	DIODE RGP15G	
C605	Δ 1-161-964-61	CERAMIC 0.0047MF	250V	D654	8-719-911-19	DIODE 1SS119	
				D655	8-719-110-41	DIODE RD15ES-82	
C606	1-125-318-00	ELECT(BLOCK) 220MF	20% 400V			CONNECTOR	
C607	Δ 1-136-360-51	FILM 0.22MF	20% 250V	F2	*1-508-765-00	3P PLUG (M)	
C608	Δ 1-136-360-51	FILM 0.22MF	20% 250V	F3	*1-508-786-00	2P PLUG (M)	
C609	Δ 1-162-578-51	CERAMIC 0.0047MF	20% 400V	F4	*1-508-768-00	6P PLUG	
C610	Δ 1-162-578-51	CERAMIC 0.0047MF	20% 400V	F5	*1-506-349-21	3P PLUG (L)	
				F6	*1-506-349-21	3P PLUG (L)	
C611	1-102-973-00	CERAMIC 100PF	5% 50V			FUSE	
C612	1-162-115-00	CERAMIC 330PF	10% 2KV	F601	Δ 1-532-350-11	FUSE, TIME-LAG 4A/250V	
C613	1-124-807-91	ELECT 4.7MF	20% 200V		*1-533-189-11	HOLDER, FUSE; F601	
C614	1-136-066-00	FILM 0.003MF	3% 2KV			IC	
C615	1-129-765-00	FILM 0.047MF	10% 200V	IC601	8-759-100-75	IC UPC1394C	
C617	1-124-902-00	ELECT 0.47MF	20% 50V	IC602	8-719-939-00	PC111S	
C618	1-162-318-11	CERAMIC 0.001MF	10% 500V	IC651	8-759-927-49	IC IR9431	
C619	1-124-245-00	ELECT 4.7MF	20% 16V			TRANSISTOR	
C620	1-124-446-11	ELECT 47MF	20% 10V	Q611	8-729-168-82	TRANSISTOR 2SC2688	
C621	1-130-475-00	FILM 0.0022MF	5% 50V	Q613	8-729-802-14	TRANSISTOR 2SC3460	
C622	1-104-067-00	POLYSTYRENE 390PF	5% 50V	Q614	8-729-168-82	TRANSISTOR 2SC2688	
C623	1-123-356-00	ELECT 10MF	20% 16V	Q615	8-729-178-54	TRANSISTOR 2SC2785	
C624	1-162-318-11	CERAMIC 0.001MF	10% 500V	Q617	8-729-178-54	TRANSISTOR 2SC2785	
C625	1-124-463-00	ELECT 0.1MF	20% 50V			RESISTOR	
C626	1-161-973-00	CERAMIC 220PF	10% 400V	R600	Δ 1-214-947-21	METAL 2.7M 1% 1/2W	
C627	1-136-319-11	FILM 0.0033MF	3% 2KV	R601	Δ 1-205-763-11	CEMENTED 3.3 10% 10W	F
C633	1-162-115-00	CERAMIC 330PF	10% 2KV	R602	Δ 1-246-521-25	CARBON 100K 5% 1/4W	
C651	1-125-319-00	ELECT(BLOCK) 330MF	20% 160V	R603	Δ 1-246-521-25	CARBON 100K 5% 1/4W	
C652	1-162-115-00	CERAMIC 330PF	10% 2KV	R604	1-249-746-11	CARBON 1.2M 5% 1/4W	
C654	1-102-030-00	CERAMIC 330PF	10% 500V	R605	1-246-545-00	CARBON 1M 5% 1/4W	
C656	1-102-030-00	CERAMIC 330PF	10% 500V	R606	1-249-423-11	CARBON 3.3K 5% 1/4W	
C657	1-161-973-00	CERAMIC 220PF	10% 400V	R610	1-247-700-11	CARBON 100 5% 1/4W	
C658	1-124-499-11	ELECT 1MF	20% 50V	R611	1-216-444-11	METAL OXIDE 82K 5% 1W	F
C659	1-108-837-00	MYLAR 0.01MF	10% 50V	R612	1-216-444-11	METAL OXIDE 82K 5% 1W	F
C660	Δ 1-162-578-51	CERAMIC 0.0047MF	20% 400V	R614	1-216-484-00	METAL OXIDE 3.9K 5% 3W	F
C661	Δ 1-162-578-51	CERAMIC 0.0047MF	20% 400V	R615	1-246-529-00	CARBON 220K 5% 1/4W	
C671	1-123-974-00	ELECT 2200MF	20% 16V	R618	1-249-396-11	CARBON 18 5% 1/4W	
C674	1-126-105-11	ELECT 1000MF	20% 35V	R620	1-217-192-21	WIREWOUND 0.22 10% 2W	F
C676	1-102-973-00	CERAMIC 100PF	5% 50V	R621	1-249-417-11	CARBON 1K 5% 1/4W	F
C680	Δ 1-108-637-11	MYLAR 0.082MF	10% 100V				
		DIODE					
D601	8-719-503-06	DIODE S3WB60Z					
D605	8-719-911-19	DIODE 1SS119					
D606	8-719-911-19	DIODE 1SS119					

F

A

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R622	1-249-434-11	CARBON	27K 5% 1/4W	*A-1296-371-A	A BOARD, COMPLETE (FOR KV-19XMD) *****		
R623	1-215-457-00	METAL	33K 1% 1/6W	*A-1296-370-A	A BOARD, COMPLETE (FOR KV-19XMTD) *****		
R624	1-249-429-11	CARBON	10K 5% 1/4W				
R625	1-249-435-11	CARBON	33K 5% 1/4W				
R626	1-249-411-11	CARBON	330 5% 1/4W				
R627	1-249-438-11	CARBON	56K 5% 1/4W	3-531-576-31	RIVET (DIA. 3), NYLON		
R628	1-214-777-00	METAL	100K 1% 1/4W	*3-662-075-00	COVER, CONTROL		
R629	1-249-432-11	CARBON	18K 5% 1/4W	*4-341-751-01	PAWL		
R630	1-215-459-00	METAL	39K 1% 1/6W	*4-341-752-01	EYELET		
R631	1-247-720-11	CARBON	3.9K 5% 1/4W	*4-370-519-01	CASE (UPPER LID), SHIELD, A PCB		
R632	1-247-753-11	CARBON	1.2K 5% 1/2W F	*4-370-520-01	CASE (MAIN), SHIELD, A PC BOARD		
R633	1-249-441-11	CARBON	100K 5% 1/4W	*4-370-521-01	CASE (BOTTOM LID), SHIELD, A PCB		
R634	1-249-417-11	CARBON	1K 5% 1/4W	*4-380-083-01	HOLDER (E), LED		
R635	1-205-927-11	WIREWOUND	2.2K 10% 10W	*4-386-674-01	HOLDER, LED		
R636	1-205-928-11	WIREWOUND	180 10% 10W				
R638	1-216-484-00	METAL OXIDE	3.9K 5% 3W F	<u>CONNECTOR</u>			
R640	1-249-438-11	CARBON	56K 5% 1/4W	A1	*1-564-259-00	PLUG, CONNECTOR (2.5MM) 13P	
R644	1-247-885-00	CARBON	180K 5% 1/4W	A3	*1-508-768-00	6P PLUG	
R651	1-246-523-00	CARBON	120K 5% 1/4W	A4	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
R652	1-215-899-11	METAL OXIDE	15K 5% 2W F	A5	*1-508-768-00	6P PLUG	
R653	1-249-417-11	CARBON	1K 5% 1/4W	A6	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
R654	1-246-523-00	CARBON	120K 5% 1/4W	A7	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
R655	1-249-469-11	CARBON	100K 5% 1/4W	A8	*1-560-125-00	PLUG, CONNECTOR (2.5MM) 5P	
R656	1-247-895-00	CARBON	470K 5% 1/4W	A9	*1-560-123-00	PLUG, CONNECTOR (2.5MM PITCH)	
R657	1-249-440-11	CARBON	82K 5% 1/4W	A10	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
R658	1-247-289-11	CARBON	8.2M 5% 1W	A11	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
R659	1-205-758-11	CEMENTED	100 10% 10W F	A12	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
R661	1-249-443-11	CARBON	0.47 5% 1/4W F	A13	*1-560-123-00	PLUG, CONNECTOR (2.5MM PITCH)	
R665	1-249-420-11	CARBON	1.8K 5% 1/4W	A15	*1-508-767-00	5P PLUG	
R669	1-249-443-11	CARBON	0.47 5% 1/4W F	DY1	*1-564-038-00	CONNECTOR PLUG, DY (MINI) 6P	
R671	1-249-410-11	CARBON	270 5% 1/4W				
R682	1-216-484-00	METAL OXIDE	3.9K 5% 3W F	<u>CAPACITOR</u>			
R688	1-249-427-11	CARBON	6.8K 5% 1/4W	C001	1-102-112-00	CERAMIC	330PF 10% 50V
R691	1-216-489-11	METAL OXIDE	27K 5% 3W F	C002	1-136-165-00	FILM	0.1MF 5% 50V
<u>VARIABLE RESISTOR</u>				C003	1-123-875-11	ELECT	10MF 20% 50V
RV601	1-230-624-41	RES, ADJ, CARBON 220		C004	1-126-101-11	ELECT	100MF 20% 16V
<u>TRANSFORMER</u>				C005	1-124-255-00	ELECT	1MF 20% 50V
T602	1-437-079-00	TRANSFORMER, HPRIZONTAL DRIVE		C006	1-124-908-11	ELECT	22MF 20% 50V
T603	1-448-895-11	SRT		C007	1-124-499-11	ELECT	1MF 20% 50V
T604	1-421-776-11	LFT		C008	1-124-255-00	ELECT	1MF 20% 50V
T605	1-421-758-11	TRANSFORMER, LINE FILTER (LFT)		C009	1-124-255-00	ELECT	1MF 20% 50V
<u>THERMISTOR</u>				C010	1-101-884-00	CERAMIC	56PF 5% 50V
TH611	1-800-954-11	THERMISTOR S-3K		C011	1-101-004-00	CERAMIC	0.01MF 50V
THP601	1-806-387-11	THERMISTOR (POSITIVE)		C014	1-124-910-11	ELECT	47MF 20% 50V
				C015	1-102-973-00	CERAMIC	100PF 5% 50V
				C016	1-124-908-11	ELECT	22MF 20% 50V
				C020	1-123-875-11	ELECT	10MF 20% 50V
				C026	1-124-122-11	ELECT	100MF 20% 50V
				C027	1-136-165-00	FILM	0.1MF 5% 50V
				C031	1-102-978-00	CERAMIC	220PF 5% 50V
				C032	1-130-489-00	MYLAR	0.033MF 10% 50V
				C033	1-106-355-12	MYLAR	0.0033MF 5% 50V
				C041	1-101-004-00	CERAMIC	0.01MF 50V

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

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Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
C048	1-101-004-00	CERAMIC	0.01MF		50V	C340	1-124-477-11	ELECT	47MF	20%	16V
C049	1-124-444-00	ELECT	220MF	20%	10V	C341	1-124-499-11	ELECT	1MF	20%	50V
C051	1-162-304-31	CERAMIC	0.0047MF	20%	16V	C346	1-124-499-11	ELECT	1MF	20%	50V
C052	1-102-745-00	CERAMIC	7PF	0.5PF	50V	C347	1-162-287-31	CERAMIC	270PF	10%	50V
C057	1-102-754-00	CERAMIC	39PF	5%	50V	C370	1-101-005-00	CERAMIC	0.022MF		50V
C081	1-124-444-00	ELECT	220MF	20%	10V	C387	1-102-074-00	CERAMIC	0.001MF	10%	50V
C082	1-124-477-11	ELECT	47MF	20%	16V	C400	1-161-494-00	CERAMIC	0.022MF		25V
C210	1-124-477-11	ELECT	47MF	20%	16V	C402	1-136-165-00	FILM	0.1MF	5%	50V
C211	1-161-494-00	CERAMIC	0.022MF	30%	25V	C403	1-136-165-00	FILM	0.1MF	5%	50V
C212	1-102-106-00	CERAMIC	100PF	10%	50V	C405	1-102-806-00	CERAMIC	27PF	5%	50V
C226	1-101-004-00	CERAMIC	0.01MF		50V	C406	1-102-526-00	CERAMIC	75PF	5%	50V
C228	1-124-477-11	ELECT	47MF	20%	16V	C407	1-136-173-00	FILM	0.47MF	5%	50V
C229	1-124-257-00	ELECT	2.2MF	20%	50V	C408	1-123-875-11	ELECT	10MF	20%	50V
C230	1-123-875-11	ELECT	10MF	20%	50V	C410	1-123-875-11	ELECT	10MF	20%	50V
C233	1-123-875-11	ELECT	10MF	20%	50V	C411	1-136-161-00	FILM	0.047MF	5%	50V
C234	1-102-119-00	CERAMIC	0.0015MF	10%	50V	C412	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C235	1-124-257-00	ELECT	2.2MF	20%	50V	C413	1-124-499-11	ELECT	1MF	20%	50V
C236	1-106-220-00	MYLAR	0.1MF	10%	100V	C414	1-136-173-00	FILM	0.47MF	5%	50V
C238	1-126-105-11	ELECT	1000MF	20%	35V	C415	1-101-005-00	CERAMIC	0.022MF		50V
C239	1-124-477-11	ELECT	47MF	20%	16V	C416	1-123-875-11	ELECT	10MF	20%	50V
C240	1-126-103-11	ELECT	470MF	20%	16V	C417	1-123-875-11	ELECT	10MF	20%	50V
C251	1-124-463-00	ELECT	0.1MF	20%	50V	C419	1-124-499-11	ELECT	1MF	20%	50V
C252	1-124-463-00	ELECT	0.1MF	20%	50V	C420	1-102-526-00	CERAMIC	75PF	5%	50V
C272	1-123-875-11	ELECT	10MF	20%	50V	C421	1-102-806-00	CERAMIC	27PF	5%	50V
C273	1-136-165-00	FILM	0.1MF	5%	50V	C423	1-136-165-00	FILM	0.1MF	5%	50V
C274	1-123-875-11	ELECT	10MF	20%	50V	C424	1-123-875-11	ELECT	10MF	20%	50V
C283	1-124-477-11	ELECT	47MF	20%	16V	C425	1-102-888-00	CERAMIC	150PF	5%	50V
C291	1-102-963-00	CERAMIC	33PF	5%	50V	C430	1-102-973-00	CERAMIC	100PF	5%	50V
C292	1-124-477-11	ELECT	47MF	20%	16V	C434	1-102-117-00	CERAMIC	820PF	10%	50V
C293	1-136-165-00	FILM	0.1MF	5%	50V	C466	1-102-074-00	CERAMIC	0.001MF	10%	50V
C294	1-136-163-00	FILM	0.068MF	5%	50V	C472	1-130-483-00	MYLAR	0.01MF	5%	50V
C301	1-126-101-11	ELECT	100MF	20%	16V	C490	1-124-477-11	ELECT	47MF	20%	16V
C303	1-124-927-11	ELECT	4.7MF	20%	50V	C501	1-108-845-00	MYLAR	0.047MF	10%	50V
C304	1-123-875-11	ELECT	10MF	20%	50V	C502	1-124-499-11	ELECT	1MF	20%	50V
C305	1-110-201-00	MYLAR	0.0033MF	5%	50V	C503	1-106-347-00	MYLAR	0.0015MF	10%	50V
C308	1-124-925-11	ELECT	2.2MF	20%	50V	C504	1-136-173-00	FILM	0.47MF	5%	50V
C310	1-123-875-11	ELECT	10MF	20%	50V	C505	1-130-490-11	MYLAR	0.039MF	10%	50V
C311	1-130-487-00	MYLAR	0.022MF	5%	50V	C506	1-124-499-11	ELECT	1MF	20%	50V
C312	1-130-487-00	MYLAR	0.022MF	5%	50V	C507	1-108-837-00	MYLAR	0.01MF	10%	50V
C316	1-136-169-00	FILM	0.22MF	5%	50V	C508	1-124-499-11	ELECT	1MF	20%	50V
C317	1-102-074-00	CERAMIC	0.001MF	10%	50V	C509	1-126-101-11	ELECT	100MF	20%	16V
C320	1-126-101-11	ELECT	100MF	20%	16V	C510	1-124-902-00	ELECT	0.47MF	20%	50V
C322	1-101-005-00	CERAMIC	0.022MF		50V	C512	1-131-363-00	TANTALUM	4.7MF	10%	16V
C323	1-124-464-11	ELECT	0.22MF	20%	50V	C513	1-129-793-00	FILM	0.047MF	5%	100V
C324	1-124-464-11	ELECT	0.22MF	20%	50V	C514	1-124-555-00	ELECT	1000MF	20%	16V
C326	1-124-464-11	ELECT	0.22MF	20%	50V	C515	1-124-120-11	ELECT	220MF	20%	16V
C328	1-102-506-00	CERAMIC	7PF	0.5PF	50V	C516	1-130-487-00	MYLAR	0.022MF	10%	50V
C331	1-124-499-11	ELECT	1MF	20%	50V	C517	1-101-888-00	CERAMIC	68PF	5%	50V
C333	1-102-959-00	CERAMIC	22PF	5%	50V	C518	1-106-367-00	MYLAR	0.01MF	10%	100V
C334	1-124-925-11	ELECT	2.2MF	20%	50V	C519	1-126-101-11	ELECT	100MF	20%	16V
C336	1-124-925-11	ELECT	2.2MF	20%	50V	C520	1-124-499-11	ELECT	1MF	20%	50V
C337	1-102-980-00	CERAMIC	270PF	5%	50V	C521	1-124-499-11	ELECT	1MF	20%	50V
C338	1-101-004-00	CERAMIC	0.01MF		50V	C522	1-136-298-00	FILM	0.0033MF	5%	100V

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C523	1-106-351-00	MYLAR	0.0022MF 5% 100V	C1416	1-124-927-11	ELECT	4.7MF 20% 50V
C524	1-130-487-00	MYLAR	0.022MF 10% 50V	C1430	1-124-499-11	ELECT	1MF 20% 50V
C525	1-126-101-11	ELECT	100MF 20% 16V	C1431	1-124-120-11	ELECT	220MF 20% 16V
C526	1-106-347-00	MYLAR	0.0015MF 10% 50V	C1432	1-101-005-00	CERAMIC	0.022MF 50V
C527	1-102-038-00	CERAMIC	0.001MF 99% 500V	C1441	1-110-199-00	MYLAR	0.0022MF 5% 50V
C531	1-123-875-11	ELECT	10MF 20% 50V	C1442	1-129-701-00	FILM	0.01MF 5% 100V
C532	1-102-074-00	CERAMIC	0.001MF 10% 50V	C1451	1-126-101-11	ELECT	100MF 20% 16V
C533	1-102-114-00	CERAMIC	470PF 10% 50V	C1459	1-124-499-11	ELECT	1MF 20% 50V
C535	1-102-074-00	CERAMIC	0.001MF 10% 50V	C1460	1-124-499-11	ELECT	1MF 20% 50V
C551	1-126-105-11	ELECT	1000MF 20% 35V	C1461	1-123-875-11	ELECT	10MF 20% 50V
C552	1-124-122-11	ELECT	100MF 20% 50V	C1462	1-124-464-11	ELECT	0.22MF 20% 50V
C553	1-106-363-00	MYLAR	0.0068MF 10% 100V	C1463	1-124-464-11	ELECT	0.22MF 20% 50V
C554	1-102-244-00	CERAMIC	220PF 10% 500V	C1464	1-124-464-11	ELECT	0.22MF 20% 50V
C555	1-106-375-12	MYLAR	0.022MF 10% 100V	C1465	1-136-165-00	FILM	0.1MF 5% 50V
C558	1-123-585-00	ELECT	470MF 10% 25V	C1466	1-106-361-00	MYLAR	0.0056MF 10% 100V
C801	1-102-114-00	CERAMIC	470PF 10% 50V	C1467	1-124-908-11	ELECT	22MF 20% 50V
C802	1-124-499-11	ELECT	1MF 20% 50V	C1468	1-101-004-00	CERAMIC	0.01MF 50V
C803	1-124-902-00	ELECT	0.47MF 20% 50V	C1469	1-136-165-00	FILM	0.1MF 5% 50V
C804	1-102-114-00	CERAMIC	470PF 10% 50V	C1470	1-124-255-00	ELECT	1MF 20% 50V
C805	1-102-030-00	CERAMIC	330PF 10% 500V	C1471	1-124-255-00	ELECT	1MF 20% 50V
C806	1-106-343-00	MYLAR	0.001MF 10% 200V	C1472	1-124-255-00	ELECT	1MF 20% 50V
C807	1-106-385-00	MYLAR	0.056MF 10% 200V	C1473	1-136-161-00	FILM	0.047MF 5% 50V
C808	1-123-024-00	ELECT	33MF 160V	C1474	1-136-161-00	FILM	0.047MF 5% 50V
C809	1-130-493-00	MYLAR	0.068MF 10% 50V	C1475	1-136-161-00	FILM	0.047MF 5% 50V
C811	1-136-545-11	FILM	0.0078MF 3% 2KV	C1476	1-136-153-00	FILM	0.01MF 5% 50V
C812	1-162-116-51	CERAMIC	680PF 10% 2KV	C1477	1-136-153-00	FILM	0.01MF 5% 50V
C813	1-124-477-11	ELECT	47MF 20% 16V	C1478	1-136-153-00	FILM	0.01MF 5% 50V
C815	1-124-004-51	ELECT	3.3MF 20% 50V	C1479	1-136-161-00	FILM	0.047MF 5% 50V
C816	1-102-963-00	CERAMIC	33PF 5% 50V	C1480	1-110-203-00	MYLAR	0.0047MF 5% 50V
C817	1-124-925-11	ELECT	2.2MF 20% 50V	C1481	1-110-203-00	MYLAR	0.0047MF 5% 50V
C819	1-102-212-00	CERAMIC	820PF 10% 500V			TRIMMER	
C820	1-106-363-00	MYLAR	0.0068MF 10% 100V	CV443	1-141-181-11	CAP, TRIMMER	
C822	1-124-910-11	ELECT	47MF 20% 35V			DIODE	
C823	1-106-375-12	MYLAR	0.022MF 10% 100V	D001	8-719-911-19	DIODE 1SS119	
C824	1-162-133-00	CERAMIC	390PF 10% 2KV	D003	8-719-911-19	DIODE 1SS119	
C830	1-136-455-00	FILM	0.43MF 5% 200V	D004	8-719-911-19	DIODE 1SS119	
C840	1-124-477-11	ELECT	47MF 20% 16V	D006	8-719-911-19	DIODE 1SS119	
C850	1-162-114-00	CERAMIC	0.0047MF 2KV	D007	8-719-911-19	DIODE 1SS119	
C851	1-101-810-00	CERAMIC	100PF 5% 500V	D008	8-719-911-19	DIODE 1SS119	
C852	1-123-948-00	ELECT	22MF 20% 250V	D010	8-719-911-19	DIODE 1SS119	
C854	1-124-927-11	ELECT	4.7MF 20% 100V	D011	8-719-123-08	DIODE RD30ES-L4	
C855	1-124-120-11	ELECT	220MF 20% 25V	D014	8-719-911-19	DIODE 1SS119	
C856	1-106-383-00	MYLAR	0.047MF 10% 200V	D017	8-719-911-19	DIODE 1SS119	
C857	1-106-383-00	MYLAR	0.047MF 10% 100V				
C858	1-162-318-11	CERAMIC	0.001MF 10% 500V	D027	8-719-911-19	DIODE 1SS119	
C859	1-106-367-00	MYLAR	0.01MF 10% 200V	D029	8-719-920-66	DIODE SLR-54VC12	
C860	1-102-228-00	CERAMIC	470PF 10% 500V	D030	8-719-946-36	DIODE SPR-54MVW57	
C862	1-124-477-11	ELECT	47MF 20% 25V	D031	8-719-911-19	DIODE 1SS119	
C863	1-102-820-00	CERAMIC	330PF 5% 50V	D032	8-719-911-19	DIODE 1SS119	
C873	1-108-683-11	MYLAR	0.0018MF 10% 200V				
C1401	1-124-908-11	ELECT	22MF 20% 50V	D033	8-719-911-19	DIODE 1SS119	
C1403	1-101-003-00	CERAMIC	0.0047MF 50V	D066	8-719-911-19	DIODE 1SS119	
C1415	1-126-101-11	ELECT	100MF 20% 16V	D067	8-719-109-93	DIODE RD6.2ES-B2	

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Ref.No.	Part No.	Description
D068	8-719-109-93	DIODE RD6.2ES-B2
D079	8-719-911-19	DIODE 1SS119
D081	8-719-109-90	DIODE RD5.6ES-B3
D084	8-719-911-19	DIODE 1SS119
D211	8-719-119-87	DIODE RD3.3ES-L1
D220	8-719-911-19	DIODE 1SS119
D242	8-719-911-19	DIODE 1SS119
D305	8-719-911-19	DIODE 1SS119
D307	8-719-911-19	DIODE 1SS119
D341	8-719-911-19	DIODE 1SS119
D401	8-719-911-19	DIODE 1SS119
D430	8-719-911-19	DIODE 1SS119
D501	8-719-911-19	DIODE 1SS119
D502	8-719-911-19	DIODE 1SS119
D503	8-719-911-19	DIODE 1SS119
D551	8-719-920-04	DIODE ERB12-04RK
D801	8-719-200-02	DIODE 10E2
D802	8-719-200-02	DIODE 10E2
D811	8-719-911-19	DIODE 1SS119
D851	8-719-924-06	DIODE ERC24-06S
D852	8-719-300-65	DIODE ES1F
D853	8-719-924-06	DIODE ERC24-06S
D854	8-719-918-77	DIODE 19G
D855	8-719-920-04	DIODE ERB12-04RK
D856	8-719-920-04	DIODE ERB12-04RK
D857	8-719-920-04	DIODE ERB12-04RK
D1401	8-719-911-19	DIODE 1SS119
D1402	8-719-911-19	DIODE 1SS119
D1403	8-719-911-19	DIODE 1SS119
D1414	8-719-911-19	DIODE 1SS119
D1415	8-719-911-19	DIODE 1SS119
D1431	8-719-911-19	DIODE 1SS119
D1441	8-719-911-19	DIODE 1SS119
D1464	8-719-911-19	DIODE 1SS119
D1465	8-719-911-19	DIODE 1SS119
D1467	8-719-120-25	DIODE RD4.3ES-L1
<u>DELAY LINE</u>		
DL 301	1-415-122-31	DELAY LINE, 1H (PAL)
<u>IC</u>		
IC001	8-759-603-96	IC M50436-515SP
IC002	8-759-603-41	IC M58655P
IC003	8-759-157-40	IC UPC574J
IC004	8-741-139-80	IC 8X-1398
IC005	8-759-403-44	IC MN1280-S
IC201	8-759-101-77	IC UPC1241H
IC300	8-752-030-86	IC CXA1001AP
IC400	8-751-750-00	IC CX-175
IC401	8-759-140-66	IC UPD4066BC
IC501	8-759-100-60	IC UPC1377C
IC551	8-759-105-82	IC UPC1378H-P

Remark	Ref.No.	Part No.	Description	Remark
	IC801	8-759-700-06	IC NJM7812B	
	IC802	8-759-701-00	IC NJM7809K	
	IC1401	8-752-030-31	IC CXA1024S	
	IC1402	8-759-140-66	IC UPD4066BC	
	<u>IF BLOCK</u>			
	IF201	1-464-553-11	IF BLOCK (IFB-389)	
	<u>JACK</u>			
	JK201	1-507-678-00	JACK	
	<u>COIL</u>			
	L001	1-410-470-11	MICRO INDUCTOR 10UH	
	L020	1-410-093-11	MICRO INDUCTOR 33MMH	
	L030	1-410-470-11	MICRO INDUCTOR 10UH	
	L090	1-410-470-11	MICRO INDUCTOR 10UH	
	L201	1-410-470-11	MICRO INDUCTOR 10UH	
	L202	1-408-408-00	MICRO INDUCTOR 8.2UH	
	L203	1-410-474-21	MICRO INDUCTOR 22UH	
	L333	1-408-419-00	MICRO INDUCTOR 68UH	
	L337	1-410-090-41	MICRO INDUCTOR 18MMH	
	L405	1-404-496-00	COIL	
	L406	1-408-411-00	MICRO INDUCTOR 15UH	
	L420	1-408-411-00	MICRO INDUCTOR 15UH	
	L421	1-404-496-00	COIL	
	L430	1-410-091-31	MICRO INDUCTOR 22MMH	
	L473	1-408-406-00	MICRO INDUCTOR 5.6UH	
	L501	1-459-155-00	COIL (WITH CORE) 45UH	
	L801	1-459-585-11	COIL (WITH CORE) (DRUM TYPE)	
	L802	1-407-365-13	COIL, CHOKE	
	L803	1-408-235-00	MICRO INDUCTOR 2.2MMH	
	L804	1-410-669-31	MICRO INDUCTOR 33UH	
	L805	1-459-635-11	HLC	
	L851	1-408-163-00	MICRO INDUCTOR 5.6MMH	
	L852	1-459-407-00	COIL, FERRITE CHOKE	
	L853	1-410-677-31	MICRO INDUCTOR 180UH	
	L854	1-408-938-00	MICRO INDUCTOR 22UH	
	L860	1-410-666-31	MICRO INDUCTOR 18UH	
	L1430	1-408-413-00	MICRO INDUCTOR 22UH	
	L1460	1-410-471-11	MICRO INDUCTOR 12UH	
	<u>NEON LAMP</u>			
	NL 801	1-519-237-11	LAMP, NEON	
	<u>TRANSISTOR</u>			
	Q001	8-729-178-54	TRANSISTOR 2SC2785	
	Q002	8-729-900-36	TRANSISTOR DTC124ES	
	Q005	8-729-900-63	TRANSISTOR DTA124ES	
	Q009	8-729-900-63	TRANSISTOR DTA124ES	
	Q010	8-729-900-63	TRANSISTOR DTA124ES	
	Q031	8-729-117-54	TRANSISTOR 2SA1175	
	Q050	8-729-900-63	TRANSISTOR DTA124ES	

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
Q055	8-729-178-54	TRANSISTOR 2SC2785		R004	1-249-433-11	CARBON 22K 5% 1/4W	
Q056	8-729-117-54	TRANSISTOR 2SA1175		R005	1-249-427-11	CARBON 6.8K 5% 1/4W	
Q063	8-729-178-54	TRANSISTOR 2SC2785		R008	1-249-413-11	CARBON 470 5% 1/4W	
Q081	8-729-177-32	TRANSISTOR 2SD773		R009	1-249-397-11	CARBON 22 5% 1/4W	
Q084	8-729-117-54	TRANSISTOR 2SA1175		R011	1-249-435-11	CARBON 33K 5% 1/4W	
Q201	8-729-178-54	TRANSISTOR 2SC2785		R012	1-247-895-00	CARBON 470K 5% 1/4W	
Q210	8-729-178-54	TRANSISTOR 2SC2785		R013	1-249-440-11	CARBON 82K 5% 1/4W	
Q242	8-729-178-54	TRANSISTOR 2SC2785		R014	1-249-434-11	CARBON 27K 5% 1/4W	
Q243	8-729-178-54	TRANSISTOR 2SC2785		R015	1-249-427-11	CARBON 6.8K 5% 1/4W	
Q251	8-729-178-54	TRANSISTOR 2SC2785		R016	1-249-429-11	CARBON 10K 5% 1/4W	
Q272	8-729-117-54	TRANSISTOR 2SA1175		R017	1-249-431-11	CARBON 15K 5% 1/4W	
Q273	8-729-117-54	TRANSISTOR 2SA1175		R018	1-249-417-11	CARBON 1K 5% 1/4W	
Q274	8-729-117-54	TRANSISTOR 2SA1175		R019	1-249-429-11	CARBON 10K 5% 1/4W	
Q291	8-729-178-54	TRANSISTOR 2SC2785		R020	1-247-891-00	CARBON 330K 5% 1/4W	
Q334	8-729-900-63	TRANSISTOR DTA124ES		R021	1-249-428-11	CARBON 8.2K 5% 1/4W	
Q353	8-729-178-54	TRANSISTOR 2SC2785		R022	1-249-429-11	CARBON 10K 5% 1/4W	
Q354	8-729-900-36	TRANSISTOR DTC124ES		R026	1-249-417-11	CARBON 1K 5% 1/4W	
Q380	8-729-900-80	TRANSISTOR DTC114ES		R027	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q387	8-729-117-54	TRANSISTOR 2SA1175		R028	1-247-891-00	CARBON 330K 5% 1/4W	
Q388	8-729-900-36	TRANSISTOR DTC124ES		R029	1-249-429-11	CARBON 10K 5% 1/4W	
Q400	8-729-178-54	TRANSISTOR 2SC2785		R030	1-249-405-11	CARBON 100 5% 1/4W	
Q401	8-729-178-54	TRANSISTOR 2SC2785		R031	1-249-413-11	CARBON 470 5% 1/4W	
Q402	8-729-178-54	TRANSISTOR 2SC2785		R032	1-215-493-00	CARBON 1M 5% 1/4W	
Q470	8-729-178-54	TRANSISTOR 2SC2785		R033	1-249-441-11	CARBON 100K 5% 1/4W	
Q503	8-729-178-54	TRANSISTOR 2SC2785		R035	1-247-849-00	CARBON 5.6K 5% 1/4W	
Q504	8-729-178-54	TRANSISTOR 2SC2785		R036	1-249-427-11	CARBON 6.8K 5% 1/4W	
Q801	8-729-168-82	TRANSISTOR 2SC2688		R037	1-249-417-11	CARBON 1K 5% 1/4W	
Q802	8-729-202-58	TRANSISTOR 2SD1555-LB		R038	1-249-417-11	CARBON 1K 5% 1/4W	
Q803	8-729-178-54	TRANSISTOR 2SC2785		R039	1-249-413-11	CARBON 470 5% 1/4W	
Q804	8-729-178-54	TRANSISTOR 2SC2785		R040	1-249-417-11	CARBON 1K 5% 1/4W	
Q805	8-729-117-54	TRANSISTOR 2SA1175		R041	1-249-413-11	CARBON 470 5% 1/4W	
Q811	8-729-177-43	TRANSISTOR 2SD774		R042	1-249-413-11	CARBON 470 5% 1/4W	
Q1401	8-729-117-54	TRANSISTOR 2SA1175		R043	1-249-413-11	CARBON 470 5% 1/4W	
Q1402	8-729-117-54	TRANSISTOR 2SA1175		R044	1-249-413-11	CARBON 470 5% 1/4W	
Q1403	8-729-117-54	TRANSISTOR 2SA1175		R045	1-249-413-11	CARBON 470 5% 1/4W	
Q1404	8-729-178-54	TRANSISTOR 2SC2785		R046	1-249-409-11	CARBON 220 5% 1/4W	
Q1405	8-729-117-54	TRANSISTOR 2SA1175		R047	1-249-409-11	CARBON 220 5% 1/4W	
Q1406	8-729-900-36	TRANSISTOR DTC124ES		R048	1-249-409-11	CARBON 220 5% 1/4W	
Q1407	8-729-904-39	TRANSISTOR DTC114TS		R049	1-249-437-11	CARBON 47K 5% 1/4W	
Q1408	8-729-904-39	TRANSISTOR DTC114TS		R050	1-249-437-11	CARBON 47K 5% 1/4W	
Q1409	8-729-178-54	TRANSISTOR 2SC2785		R051	1-249-431-11	CARBON 15K 5% 1/4W	
Q1410	8-729-117-54	TRANSISTOR 2SA1175		R052	1-249-466-11	CARBON 56K 5% 1/4W	
Q1440	8-729-900-89	TRANSISTOR DTC144ES		R053	1-249-429-11	CARBON 10K 5% 1/4W	
Q1441	8-729-117-54	TRANSISTOR 2SA1175		R056	1-247-717-11	CARBON 2.2K 5% 1/4W	F
Q1442	8-729-117-54	TRANSISTOR 2SA1175		R059	1-249-417-11	CARBON 1K 5% 1/4W	
Q1460	8-729-178-54	TRANSISTOR 2SC2785		R062	1-249-417-11	CARBON 1K 5% 1/4W	
Q1462	8-729-904-34	TRANSISTOR DTA114TS		R063	1-249-429-11	CARBON 10K 5% 1/4W	
Q2402	8-729-900-36	TRANSISTOR DTC124ES		R064	1-215-866-11	METAL OXIDE 330 5% 1W	F
RESISTOR				R069	1-249-429-11	CARBON 10K 5% 1/4W	
R001	1-249-433-11	CARBON 22K 5% 1/4W		R070	1-249-421-11	CARBON 2.2K 5% 1/4W	
R002	1-249-433-11	CARBON 22K 5% 1/4W		R071	1-215-491-00	CARBON 820K 5% 1/4W	
R003	1-249-433-11	CARBON 22K 5% 1/4W		R072	1-247-887-00	CARBON 220K 5% 1/4W	
				R073	1-247-725-11	CARBON 10K 5% 1/4W	

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Ref.No.	Part No.	Description				Remark	Ref.No.	Part No.	Description				Remark
R081	1-249-410-11	CARBON	270	5%	1/4W		R303	1-249-469-11	CARBON	100K	5%	1/4W	
R082	1-215-900-11	METAL OXIDE	22K	5%	2W	F	R304	1-246-511-00	CARBON	39K	5%	1/4W	
R083	1-249-417-11	CARBON	1K	5%	1/4W		R305	1-247-883-00	CARBON	150K	5%	1/4W	
R084	1-247-703-11	CARBON	180	5%	1/4W		R306	1-249-435-11	CARBON	33K	5%	1/4W	
R085	1-249-437-11	CARBON	47K	5%	1/4W		R308	1-249-429-11	CARBON	10K	5%	1/4W	
R086	1-246-517-25	CARBON	68K	5%	1/4W		R309	1-249-460-11	CARBON	15K	5%	1/4W	
R087	1-249-409-11	CARBON	220	5%	1/4W		R311	1-249-439-11	CARBON	68K	5%	1/4W	
R088	1-249-437-11	CARBON	47K	5%	1/4W		R312	1-249-439-11	CARBON	68K	5%	1/4W	
R091	1-249-421-11	CARBON	2.2K	5%	1/4W		R316	1-249-415-11	CARBON	680	5%	1/4W	
R092	1-249-421-11	CARBON	2.2K	5%	1/4W		R317	1-249-421-11	CARBON	2.2K	5%	1/4W	
R093	1-249-417-11	CARBON	1K	5%	1/4W		R319	1-249-433-11	CARBON	22K	5%	1/4W	
R094	1-249-416-11	CARBON	820	5%	1/4W		R321	1-249-416-11	CARBON	820	5%	1/4W	
R095	1-246-517-25	CARBON	68K	5%	1/4W		R323	1-249-441-11	CARBON	100K	5%	1/4W	
R096	1-249-429-11	CARBON	10K	5%	1/4W		R324	1-249-441-11	CARBON	100K	5%	1/4W	
R097	1-249-409-11	CARBON	220	5%	1/4W		R326	1-249-441-11	CARBON	100K	5%	1/4W	
R098	1-249-437-11	CARBON	47K	5%	1/4W		R330	1-249-429-11	CARBON	10K	5%	1/4W	
R099	1-249-437-11	CARBON	47K	5%	1/4W		R331	1-215-493-00	CARBON	1M	5%	1/4W	
R100	1-247-710-11	CARBON	560	5%	1/4W		R332	1-247-891-00	CARBON	330K	5%	1/4W	
R201	1-249-435-11	CARBON	33K	5%	1/4W		R333	1-249-414-11	CARBON	560	5%	1/4W	
R203	1-249-430-11	CARBON	12K	5%	1/4W		R335	1-249-420-11	CARBON	1.8K	5%	1/4W	
R204	1-249-433-11	CARBON	22K	5%	1/4W		R336	1-249-409-11	CARBON	220	5%	1/4W	
R206	1-249-409-11	CARBON	220	5%	1/4W		R337	1-249-428-11	CARBON	8.2K	5%	1/4W	
R207	1-247-713-11	CARBON	1K	5%	1/4W		R340	1-249-421-11	CARBON	2.2K	5%	1/4W	
R210	1-249-417-11	CARBON	1K	5%	1/4W		R341	1-249-422-11	CARBON	2.7K	5%	1/4W	
R211	1-202-551-00	SOL ID	120	10%	1/2W		R342	1-249-428-11	CARBON	8.2K	5%	1/4W	
R212	1-249-405-11	CARBON	100	5%	1/4W		R343	1-249-433-11	CARBON	22K	5%	1/4W	
R220	1-249-409-11	CARBON	220	5%	1/4W		R346	1-247-849-00	CARBON	5.6K	5%	1/4W	
R221	1-249-417-11	CARBON	1K	5%	1/4W		R350	1-249-429-11	CARBON	10K	5%	1/4W	
R222	1-215-493-00	CARBON	1M	5%	1/4W		R374	1-249-435-11	CARBON	33K	5%	1/4W	
R231	1-247-713-11	CARBON	1K	5%	1/4W		R375	1-249-435-11	CARBON	33K	5%	1/4W	
R232	1-249-432-11	CARBON	18K	5%	1/4W		R387	1-249-427-11	CARBON	6.8K	5%	1/4W	
R234	1-249-431-11	CARBON	15K	5%	1/4W		R388	1-247-891-00	CARBON	330K	5%	1/4W	
R235	1-249-417-11	CARBON	1K	5%	1/4W		R389	1-249-435-11	CARBON	33K	5%	1/4W	
R236	1-249-447-11	CARBON	1	5%	1/4W		R393	1-249-429-11	CARBON	10K	5%	1/4W	
R237	1-216-357-00	METAL OXIDE	4.7	5%	1W	F	R395	1-215-489-00	CARBON	680K	5%	1/4W	
R251	1-249-466-11	CARBON	56K	5%	1/4W		R401	1-249-409-11	CARBON	220	5%	1/4W	
R252	1-249-433-11	CARBON	22K	5%	1/4W		R402	1-247-715-11	CARBON	1.5K	5%	1/4W	
R263	1-249-433-11	CARBON	22K	5%	1/4W		R403	1-249-429-11	CARBON	10K	5%	1/4W	
R264	1-249-433-11	CARBON	22K	5%	1/4W		R406	1-249-412-11	CARBON	390	5%	1/4W	
R265	1-247-718-11	CARBON	2.7K	5%	1/4W		R410	1-249-422-11	CARBON	2.7K	5%	1/4W	
R266	1-247-714-11	CARBON	1.2K	5%	1/4W	F	R411	1-215-489-00	CARBON	680K	5%	1/4W	
R272	1-249-433-11	CARBON	22K	5%	1/4W		R415	1-247-725-11	CARBON	10K	5%	1/4W	
R273	1-249-433-11	CARBON	22K	5%	1/4W		R418	1-247-719-11	CARBON	3.3K	5%	1/4W	
R274	1-249-433-11	CARBON	22K	5%	1/4W		R419	1-249-432-11	CARBON	18K	5%	1/4W	
R278	1-249-409-11	CARBON	220	5%	1/4W		R420	1-249-412-11	CARBON	390	5%	1/4W	
R279	1-249-409-11	CARBON	220	5%	1/4W		R424	1-249-430-11	CARBON	12K	5%	1/4W	
R290	1-249-435-11	CARBON	33K	5%	1/4W		R425	1-249-408-11	CARBON	180	5%	1/4W	
R291	1-249-429-11	CARBON	10K	5%	1/4W		R426	1-249-428-11	CARBON	8.2K	5%	1/4W	
R292	1-249-413-11	CARBON	470	5%	1/4W		R427	1-249-417-11	CARBON	1K	5%	1/4W	
R293	1-247-891-00	CARBON	330K	5%	1/4W		R429	1-249-432-11	CARBON	18K	5%	1/4W	
R300	1-249-429-11	CARBON	10K	5%	1/4W		R430	1-249-423-11	CARBON	3.3K	5%	1/4W	
R301	1-249-413-11	CARBON	470	5%	1/4W		R431	1-249-422-11	CARBON	2.7K	5%	1/4W	
							R432	1-249-425-11	CARBON	4.7K	5%	1/4W	

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R433	1-249-425-11	CARBON	4.7K 5% 1/4W	R562	1-246-525-00	CARBON	150K 5% 1/4W
R434	1-249-414-11	CARBON	560 5% 1/4W	R563	1-246-545-00	CARBON	1M 5% 1/4W
R435	1-249-417-11	CARBON	1K 5% 1/4W	R565	1-249-409-11	CARBON	220 5% 1/4W
R436	1-249-418-11	CARBON	1.2K 5% 1/4W	R576	1-249-413-11	CARBON	470 5% 1/4W
R437	1-246-509-25	CARBON	33K 5% 1/4W	R578	1-249-401-11	CARBON	47 5% 1/4W
R438	1-249-433-11	CARBON	22K 5% 1/4W	R580	1-249-409-11	CARBON	220 5% 1/4W
R439	1-249-414-11	CARBON	560 5% 1/4W	R801	1-249-406-11	CARBON	120 5% 1/4W
R440	1-249-417-11	CARBON	1K 5% 1/4W	R802	1-249-437-11	CARBON	47K 5% 1/4W
R470	1-249-423-11	CARBON	3.3K 5% 1/4W	R803	1-247-717-11	CARBON	2.2K 5% 1/4W
R471	1-249-427-11	CARBON	6.8K 5% 1/4W	R804	1-247-717-11	CARBON	2.2K 5% 1/4W F
R472	1-249-417-11	CARBON	1K 5% 1/4W	R805	1-247-716-11	CARBON	1.8K 5% 1/4W F
R473	1-249-412-11	CARBON	390 5% 1/4W	R806	1-205-642-00	CEMENTED	3.3K 10% 5W
R504	1-249-409-11	CARBON	220 5% 1/4W	R807	1-216-346-00	METAL OXIDE	0.56 5% 1W F
R505	1-249-409-11	CARBON	220 5% 1/4W	R808	1-247-700-11	CARBON	100 5% 1/4W
R507	1-249-417-11	CARBON	1K 5% 1/4W	R809	1-247-708-11	CARBON	470 5% 1/4W F
R508	1-249-422-11	CARBON	2.7K 5% 1/4W	R810	1-213-131-00	METAL OXIDE	100 5% 1W F
R509	1-249-424-11	CARBON	3.9K 5% 1/4W	R811	1-247-725-11	CARBON	10K 5% 1/4W
R510	1-249-435-11	CARBON	33K 5% 1/4W	R812	1-249-427-11	CARBON	6.8K 5% 1/4W F
R511	1-215-461-00	METAL	47K 1% 1/6W	R813	1-249-429-11	CARBON	10K 5% 1/4W
R512	1-249-417-11	CARBON	1K 5% 1/4W	R814	1-249-432-11	CARBON	18K 5% 1/4W
R513	1-215-475-00	METAL	180K 1% 1/6W	R815	1-249-414-11	CARBON	560 5% 1/4W
R514	1-215-455-00	METAL	27K 1% 1/6W	R816	1-249-416-11	CARBON	820 5% 1/4W
R515	1-249-429-11	CARBON	10K 5% 1/4W	R817	1-249-405-11	CARBON	100 5% 1/4W
R516	1-214-771-00	METAL	56K 1% 1/4W	R819	1-247-692-11	CARBON	22 5% 1/4W F
R517	1-249-429-11	CARBON	10K 5% 1/4W	R820	1-247-717-11	CARBON	2.2K 5% 1/4W F
R518	1-247-849-00	CARBON	5.6K 5% 1/4W	R821	1-213-133-00	METAL OXIDE	150 5% 1W F
R519	1-249-415-11	CARBON	680 5% 1/4W	R822	1-213-133-00	METAL OXIDE	150 5% 1W F
R520	1-247-710-11	CARBON	560 5% 1/4W F	R823	1-213-133-00	METAL OXIDE	150 5% 1W F
R521	1-249-430-11	CARBON	12K 5% 1/4W	R836	1-246-523-00	CARBON	120K 5% 1/4W
R523	1-247-120-00	CARBON	360 5% 1/4W	R837	1-202-830-00	SOLID	10K 10% 1/2W
R524	1-214-767-00	METAL	39K 1% 1/4W	R838	1-215-862-11	METAL OXIDE	68 5% 1W F
R525	1-247-723-11	CARBON	6.8K 5% 1/4W F	R839	1-249-425-11	CARBON	4.7K 5% 1/4W
R526	1-216-464-11	METAL OXIDE	18K 5% 2W F	R842	1-249-433-11	CARBON	22K 5% 1/4W
R527	1-247-711-11	CARBON	680 5% 1/4W F	R843	1-249-466-11	CARBON	56K 5% 1/4W
R529	1-249-423-11	CARBON	3.3K 5% 1/4W	R844	1-249-462-11	CARBON	22K 5% 1/4W F
R530	1-249-440-11	CARBON	82K 5% 1/4W	R845	1-247-849-00	CARBON	5.6K 5% 1/4W
R531	1-249-440-11	CARBON	82K 5% 1/4W	R850	1-247-720-11	CARBON	3.9K 5% 1/4W
R532	1-249-430-11	CARBON	12K 5% 1/4W	R852	1-215-869-11	METAL OXIDE	1K 5% 1W F
R533	1-249-434-11	CARBON	27K 5% 1/4W	R853	1-215-881-11	METAL OXIDE	15 5% 2W F
R535	1-247-688-11	CARBON	10 5% 1/4W F	R854	1-249-443-11	CARBON	0.47 5% 1/4W F
R536	1-247-713-11	CARBON	1K 5% 1/4W	R856	1-247-722-11	CARBON	5.6K 5% 1/4W
R539	1-247-725-11	CARBON	10K 5% 1/4W	R858	1-247-722-11	CARBON	5.6K 5% 1/4W
R540	1-249-425-11	CARBON	4.7K 5% 1/4W	R859	1-214-781-00	METAL	150K 1% 1/4W
R541	1-249-437-11	CARBON	47K 5% 1/4W	R866	1-249-423-11	CARBON	3.3K 5% 1/4W
R542	1-249-427-11	CARBON	6.8K 5% 1/4W	R869	1-249-421-11	CARBON	2.2K 5% 1/4W
R543	1-249-429-11	CARBON	10K 5% 1/4W	R870	1-247-849-00	CARBON	5.6K 5% 1/4W
R551	1-247-721-11	CARBON	4.7K 5% 1/4W	R872	1-247-849-00	CARBON	5.6K 5% 1/4W
R552	1-215-867-00	METAL OXIDE	470 5% 1W F	R1401	1-249-409-11	CARBON	220 5% 1/4W
R555	1-247-688-11	CARBON	10 5% 1/4W F	R1402	1-247-713-11	CARBON	1K 5% 1/4W
R556	1-247-744-11	CARBON	270 5% 1/2W	R1404	1-247-700-11	CARBON	100 5% 1/4W
R557	1-216-352-11	METAL OXIDE	1.8 5% 1W F	R1405	1-249-441-11	CARBON	100K 5% 1/4W
R558	1-247-769-00	CARBON	2.7 5% 1/4W	R1406	1-249-423-11	CARBON	3.3K 5% 1/4W
R561	1-246-523-00	CARBON	120K 5% 1/4W	R1407	1-249-417-11	CARBON	1K 5% 1/4W
				R1408	1-249-439-11	CARBON	68K 5% 1/4W

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R1409	1-249-439-11	CARBON	68K 5% 1/4W	R1487	1-249-405-11	CARBON	100 5% 1/4W
R1410	1-249-421-11	CARBON	2.2K 5% 1/4W	R1488	1-249-405-11	CARBON	100 5% 1/4W
R1411	1-249-409-11	CARBON	220 5% 1/4W	R1489	1-249-405-11	CARBON	100 5% 1/4W
R1412	1-249-429-11	CARBON	10K 5% 1/4W	R1490	1-247-725-11	CARBON	10K 5% 1/4W
R1413	1-249-417-11	CARBON	1K 5% 1/4W	R1491	1-215-431-00	METAL	2.7K 1% 1/6W
R1414	1-249-421-11	CARBON	2.2K 5% 1/4W	R1492	1-215-469-00	METAL	100K 1% 1/6W
R1417	1-249-417-11	CARBON	1K 5% 1/4W	R1493	1-215-475-00	METAL	180K 1% 1/6W
R1418	1-249-417-11	CARBON	1K 5% 1/4W	R1494	1-249-421-11	CARBON	2.2K 5% 1/4W
R1419	1-249-417-11	CARBON	1K 5% 1/4W	R1495	1-215-491-00	CARBON	820K 5% 1/4W
R1420	1-249-385-11	CARBON	2.2 5% 1/4W F	R1499	1-249-441-11	CARBON	100K 5% 1/4W
R1430	1-249-417-11	CARBON	1K 5% 1/4W	R2432	1-247-719-11	CARBON	3.3K 5% 1/4W
R1431	1-247-713-11	CARBON	1K 5% 1/4W	R2433	1-249-423-11	CARBON	3.3K 5% 1/4W
R1432	1-249-429-11	CARBON	10K 5% 1/4W	R2434	1-249-423-11	CARBON	3.3K 5% 1/4W
R1433	1-249-425-11	CARBON	4.7K 5% 1/4W	R2435	1-249-433-11	CARBON	22K 5% 1/4W
R1434	1-247-744-11	CARBON	270 5% 1/2W	R2437	1-249-429-11	CARBON	10K 5% 1/4W
R1435	1-249-397-11	CARBON	22 5% 1/4W F	<u>VARIABLE RESISTOR</u>			
R1440	1-247-717-11	CARBON	2.2K 5% 1/4W	RV003	1-237-435-11	RES, VAR, CARBON(WITH SW)10KX2	
R1441	1-249-441-11	CARBON	100K 5% 1/4W	RV004	1-228-993-00	RES, ADJ, CARBON 4.7K	
R1442	1-249-421-11	CARBON	2.2K 5% 1/4W	RV301	1-230-624-41	RES, ADJ, CARBON 220	
R1443	1-215-479-00	METAL	270K 1% 1/6W	RV302	1-226-773-11	RES, ADJ, METAL GLAZE 22K	
R1444	1-249-441-11	CARBON	100K 5% 1/4W	RV303	1-230-630-11	RES, ADJ, CARBON 10K	
R1445	1-249-433-11	CARBON	22K 5% 1/4W	RV501	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K	
R1446	1-249-437-11	CARBON	47K 5% 1/4W	RV502	1-228-993-00	RES, ADJ, CARBON 4.7K	
R1447	1-249-417-11	CARBON	1K 5% 1/4W	RV503	1-230-624-41	RES, ADJ, CARBON 220	
R1448	1-249-437-11	CARBON	47K 5% 1/4W	RV504	1-230-628-11	RES, ADJ, CARBON 2.2K	
R1450	1-249-397-11	CARBON	22 5% 1/4W	RV551	1-224-250-XX	RES, ADJ, METAL GLAZE 2.2K	
R1453	1-215-435-00	METAL	3.9K 1% 1/6W	RV873	1-228-993-00	RES, ADJ, CARBON 4.7K	
R1454	1-215-439-00	METAL	5.6K 1% 1/6W	RV875	1-230-628-11	RES, ADJ, CARBON 2.2K	
R1458	1-247-885-00	CARBON	180K 5% 1/4W	<u>SWITCH</u>			
R1459	1-249-431-11	CARBON	15K 5% 1/4W	S001	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1460	1-246-517-25	CARBON	68K 5% 1/4W	S002	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1461	1-249-409-11	CARBON	220 5% 1/4W	S003	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1462	1-249-405-11	CARBON	100 5% 1/4W	S005	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1463	1-249-405-11	CARBON	100 5% 1/4W	S006	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1464	1-249-405-11	CARBON	100 5% 1/4W	S007	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1465	1-247-887-00	CARBON	220K 5% 1/4W	S008	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1466	1-249-417-11	CARBON	1K 5% 1/4W	S009	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1467	1-247-895-00	CARBON	470K 5% 1/4W	S010	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1468	1-249-409-11	CARBON	220 5% 1/4W	S011	1-554-804-11	SWITCH, PUSH (1 KEY)	
R1470	1-249-405-11	CARBON	100 5% 1/4W	<u>SPARK GAP</u>			
R1472	1-249-405-11	CARBON	100 5% 1/4W	SG801	1-519-063-XX	DISCHARGING GAP	
R1473	1-249-405-11	CARBON	100 5% 1/4W	<u>TRANSFORMER</u>			
R1476	1-249-438-11	CARBON	56K 5% 1/4W	T301	1-404-524-11	DAT	
R1477	1-249-417-11	CARBON	1K 5% 1/4W	T401	1-404-584-11	COIL	
R1478	1-249-462-11	CARBON	22K 5% 1/4W	T801	1-421-351-00	H.PCT	
R1479	1-247-895-00	CARBON	470K 5% 1/4W	T802	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE	
R1480	1-249-421-11	CARBON	2.2K 5% 1/4W	T851	1-439-363-11	TRANSFORMER ASSY, FLYBACK	
R1481	1-247-717-11	CARBON	2.2K 5% 1/4W				
R1482	1-249-421-11	CARBON	2.2K 5% 1/4W				
R1483	1-249-437-11	CARBON	47K 5% 1/4W				
R1484	1-249-417-11	CARBON	1K 5% 1/4W				
R1485	1-249-417-11	CARBON	1K 5% 1/4W				
R1486	1-249-417-11	CARBON	1K 5% 1/4W				

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A

U

C

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
<u>THERMISTOR</u>				<u>RESISTOR</u>			
TH501	1-806-213-11	THERMISTOR		R2401	1-247-711-11	CARBON 680 5% 1/4W	
<u>TUNER</u>				R2402	1-249-437-11	CARBON 47K 5% 1/4W	
TU201	1-463-761-11	TUNER, ET (BT-883B)		R2403	1-249-425-11	CARBON 4.7K 5% 1/4W	
<u>CRYSTAL</u>				R2404	1-249-382-11	CARBON 1.2 5% 1/4W	F
X001	1-567-686-11	OSCILLATOR, CERAMIC		R2405	1-249-434-11	CARBON 27K 5% 1/4W	
X443	1-567-504-11	OSCILLATOR, CRYSTAL		R2406	1-249-429-11	CARBON 10K 5% 1/4W	
<u>YC MODULE</u>				R2407	1-249-429-11	CARBON 10K 5% 1/4W	
YCM301	1-235-833-11	YC MODULE		R2408	1-215-479-00	CARBON 270K 5% 1/4W	
*****				R2409	1-249-439-11	CARBON 68K 5% 1/4W	
*A-1373-084-A U BOARD, COMPLETE				R2410	1-249-431-11	CARBON 15K 5% 1/4W	
*****				R2411	1-249-431-11	CARBON 15K 5% 1/4W	
<u>CAPACITOR</u>				R2412	1-249-429-11	CARBON 10K 5% 1/4W	
C2401	1-124-462-00	ELECT 10MF 20% 16V		R2414	1-249-425-11	CARBON 4.7K 5% 1/4W	
C2403	1-124-255-00	ELECT 1MF 20% 50V		R2415	1-249-425-11	CARBON 4.7K 5% 1/4W	
C2405	1-124-236-00	ELECT 47MF 20% 16V		R2421	1-249-404-00	CARBON 82 5% 1/4W	
C2406	1-124-255-00	ELECT 1MF 20% 50V		R2422	1-249-410-11	CARBON 270 5% 1/4W	
C2409	1-162-294-31	CERAMIC 0.001MF 10% 50V		R2423	1-249-423-11	CARBON 3.3K 5% 1/4W	
C2410	1-161-494-00	CERAMIC 0.022MF 25V		R2425	1-249-404-00	CARBON 82 5% 1/4W	
C2411	1-124-236-00	ELECT 47MF 20% 16V		R2426	1-249-404-00	CARBON 82 5% 1/4W	
C2412	1-124-236-00	ELECT 47MF 20% 16V		R2427	1-249-404-00	CARBON 82 5% 1/4W	
C2413	1-161-494-00	CERAMIC 0.022MF 25V		R2428	1-249-404-00	CARBON 82 5% 1/4W	
C2414	1-124-236-00	ELECT 47MF 20% 16V		R2429	1-249-425-11	CARBON 4.7K 5% 1/4W	
C2415	1-124-234-00	ELECT 22MF 20% 16V		R2430	1-249-401-11	CARBON 47 5% 1/4W	
C2416	1-124-234-00	ELECT 22MF 20% 16V		R2438	1-249-428-11	CARBON 8.2K 5% 1/4W	
C2417	1-124-234-00	ELECT 22MF 20% 16V		R2439	1-249-417-11	CARBON 1K 5% 1/4W	
<u>DIODE</u>				R2440	1-249-419-11	CARBON 1.5K 5% 1/4W	
D2401	8-719-110-35	DIODE RD13ES-B1		R2441	1-247-696-11	CARBON 47 5% 1/4W	
D2402	8-719-110-35	DIODE RD13ES-B1		R2442	1-249-425-11	CARBON 4.7K 5% 1/4W	
D2403	8-719-110-35	DIODE RD13ES-B1		R2443	1-215-489-00	CARBON 680K 5% 1/4W	
D2405	8-719-110-35	DIODE RD13ES-B1		R2445	1-247-891-00	CARBON 330K 5% 1/4W	
D2406	8-719-110-35	DIODE RD13ES-B1		*****			
D2407	8-719-110-35	DIODE RD13ES-B1		*A-1330-805-A C BOARD, COMPLETE			
<u>JACK</u>				*****			
J2401	1-561-534-41	SOCKET 21P		1-526-814-11 SOCKET, CRT			
<u>TRANSISTOR</u>				*4-374-704-01 COVER (REAR LID), CV VOL			
Q2401	8-729-178-54	TRANSISTOR 2SC2785		*4-374-717-01 COVER (MAIN), CV VOL			
Q2402	8-729-178-54	TRANSISTOR 2SC2785		<u>CONNECTOR</u>			
Q2403	8-729-178-54	TRANSISTOR 2SC2785		C1	*1-506-371-00	2P PLUG (L)	
Q2405	8-729-178-54	TRANSISTOR 2SC2785		C2	*1-508-768-00	6P PLUG	
Q2406	8-729-117-54	TRANSISTOR 2SA1175		C3	*1-560-985-00	PLUG, CONNECTOR (2.5MM) 11P	
				<u>CAPACITOR</u>			
				C701	1-102-115-00	CERAMIC 560PF 10% 50V	
				C702	1-102-113-00	CERAMIC 390PF 10% 50V	
				C703	1-102-114-00	CERAMIC 470PF 10% 50V	
				C704	1-102-121-00	CERAMIC 0.0022MF 10% 50V	
				C705	1-123-356-00	ELECT 10MF 20% 25V	
				C706	1-102-074-00	CERAMIC 0.001MF 10% 50V	
				C707	1-129-718-00	FILM 0.022MF 10% 630V	

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V

Ref.No.	Part No.	Description	Remark
R46	1-249-393-11	CARBON 10 5% 1/4W	
VARIABLE RESISTOR			
RV01	1-228-991-00	RES, ADJ, CARBON 2.2K	
CONNECTOR			
V1	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
V2	*1-560-125-00	PLUG, CONNECTOR (2.5MM) 5P	
V3	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
V4	*1-560-123-00	PLUG, CONNECTOR (2.5MM PITCH)	
V5	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
V6	*1-508-784-00	1P PLUG	
CRYSTAL			
X01	1-527-734-00	VIBRATOR, CRYSTAL	
X02	1-567-905-11	VIBRATOR, CRYSTAL	
X03	1-567-686-11	OSCILLATOR, CERAMIC	

MISCELLANEOUS			

A.1-451-279-21	DEFLECTION YOKE (SY165)		
1-452-032-00	MAGNET, DISK; 10MM ϕ		
1-452-094-00	MAGNET ROTATABLE, DISK; 15MM ϕ		
1-452-277-00	MAGNET, BMC		
1-503-258-21	SPEAKER		
A.1-534-817-71	CORD, POWER		
A.1-537-097-11	TERMINAL BOARD ASSY, ANTENNA		
1-543-179-00	CORE, RING		
A.1-554-966-12	SWITCH, PUSH (AC POWER)(1 KEY)		
*1-557-241-31	CABLE, P-P		
L901 A.1-426-331-11	COIL, DEMAGNETIZATION		
V901 A.8-737-951-05	PICTURE TUBE (A46JNL10X)		

ACCESSORIES AND PACKING MATERIALS			

Part No.	Description	Remark	
A-1470-760-A	COMMANDER ASSY (RM-652)(FOR KV-19XMD)		
A-1470-816-A	COMMANDER ASSY (RM-654)(FOR KV-19XMTD)		
*4-369-325-01	BAG, PROTECTION		
*4-385-517-01	CUSHION (UPPER) (ASSY)		
*4-385-518-01	CUSHION (LOWER) (ASSY)		
4-482-399-91	MANUAL, INSTRUCTION		

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